By WALTER WINANS

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THE AUTHOR

The Modern Pistol

And How to Shoot It

By

Walter Winans

Commander of the Royal Spanish Order of Isabel la Catolica; Commander of the Royal Roumanian Order of the Crown; Officer of the Royal Roumanian Order of the Star; Chevalier of the Russian Order of St. Stanislaus; The Royal Swedish Medal of the Olympic Games; World's Championship Gold Medallist, Olympic Games, London, 1908, for Double Rifle Shooting; Vice-President of the National Rifle Association of Great Britain; Life Member, National Rifle Association of the United States of America; Life Member of the United States Revolver Association; Member of the Association of American International Riflemen; Revolver Champion for five years of the National Rifle Association of Great Britain; Ten years Revolver Champion of the North London Rifle Club; Seven years Revolver Champion of the South London Rifle Club; Member of Le Pistolet Club, Paris, etc., etc.

With Forty-six Illustrations

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PREFACE

My first book on pistol shooting (*The Art of Revolver Shooting*) was published in 1900. Up to that date there existed no book which contained instruction on pistol shooting, though several books had appeared describing the different makes of pistols.

Since that date several books have appeared—some very good ones, by various revolver experts. Unfortunately (as always happens when something original appears), others who were not revolver shots took to writing books on the same subject, largely made up of unacknowledged extracts from my books. Not understanding their subject, they distorted my teaching, and so any one trying to learn pistol shooting from them gets hopelessly confused.

I therefore give this warning; do not follow the advice of any but an acknowledged expert in pistol shooting, as books by hack writers, made up of extracts from other writers, and illustrations from gunmakers' catalogues, are not to be taken seriously.

Moreover, the revolver is now obsolete, and there is no use learning to shoot it.

My object in writing this book is to give instruction in the modern substitute for the revolver. That is to say, the automatic pistol, and incidentally, to instruct in the single shot or duelling pistol.

For those who wish to study revolver shooting, I would refer them to my book *The Art of Revolver Shooting*.

The present work might be called volume ii. of *The Art of Revolver Shooting*, as it instructs in the form of pistol shooting which has now taken the place of revolver shooting.

Though the revolver is now obsolete, my *Art of Revolver Shooting* is of interest, as giving details of out-of-date firearms, and the best-on-record scores made with them.

These records will be of the greatest importance for future generations.

There are now no records extant of scores made with the long bow, the cross-bow, and the various stone-hurling slings and balistæ. All concerning them is legendary.

If we depended only on newspaper articles for what was possible in revolver shooting, we should get legends similar to those of obsolete arms.

I was credited with making a World's Record with a revolver at five hundred yards by a reporter when it should have been fifty yards. He merely added a nought to the figures.

As all records are important for historical purposes, and for comparison with future scores, I

give as an appendix in this book those revolver records which cannot now be beaten, the revolvers and cartridges being now no longer made.

It is curious how, even up to the outbreak of the Great War, people did not understand that shooting was more important than playing games, or that shooting had to be learned.

I recently read a "trench anecdote" which relates that a man who had never fired a shot before he was conscripted was shot in the back, and whilst dying, "seized his rifle and dropped an enemy who was running past 200 yards off."

To do this would require a first-class trained rifle shot who specialized in shooting at moving objects, and even he, with his back broken, could not swing, which is the essence of successful shooting at moving objects.

Another writer, a lieutenant, wrote during the war to one of the daily papers, advising the purchase of a revolver to be deferred till actually starting for the Front!

I have had several men on leave bring me revolvers and automatic pistols, asking me to test them, as they could not hit anything with them at the Front.

With one of these pistols I made the highest possible score at thirty yards; with another I made ten out of twelve bulls at twenty yards. None of the pistols was wrong. It was the men's lack of skill.

Just before the war, several rifle ranges in Eng-

land were closed, because they interfered with golf players.

It is to be hoped that after this war, men will spend their spare time in learning rifle and pistol shooting instead of wasting it in games, and will not close rifle ranges because they interfere with their golf links.

The fallacy that games are the best training for military service is exposed by a very interesting article in the *Field* newspaper.

I maintain that no man who has not the instinct to shoot ingrained in him, will shoot when under intense excitement and danger. If he is a player of games he will not shoot, but throw things at his adversary, or use his rifle as a pike or club.

Mr. John Lloyd Balderston, writing to the *Field* newspaper of September 29, 1917, says:

"An officer showed me his charges going through a mimic attack—*firing rifle volleys instead of hurling bombs or going in with the bayonet;* in these attacks reliance was placed too much on the bayonet and bomb—now we have realized that when the enemy runs away and you run after him he is likely to get away. Accordingly we teach the men not to rush wildly along with the sole idea of bayoneting, but to stop and pump some bullets after him."

WALTER WINANS.

January 1, 1919,
17 AVENUE DE TERONEREN,
BRUXELLES, BELGIQUE.

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The Modern Pistol and How to Shoot it

CHAPTER I

INTRODUCTION

THERE is now no use learning revolver shooting. That form of pistol is obsolete except in the few instances where it survives for target shooting, or is carried for self-defence; just as flintlock muskets even now survive in out-of-the-way parts of the world.

If a man tries to defend himself with a revolver against another armed with an automatic pistol he is at a great disadvantage.

The automatic is more accurate than a revolver, as the "blow-back" does not vary as much as does the escape of gas past the cylinder in a revolver.

The bullet in the revolver has to jump into the cylinder, whereas in the automatic it is already fitted up against the rifling, before being fired.

The single-shot pistol is the most accurate of any, there being no escape of gas.

The automatic has not only a much longer range than the revolver (although the popular idea that it can be shot accurately at a thousand yards or more is nonsense) but it cocks itself instead of having to be cocked by the thumb, or trigger finger.

Cocking by trigger-pull is such a strain on, not only the trigger finger, but the whole hand, that, after a few shots, good shooting cannot be made.

I won all my rapid-firing revolver competitions using the single action and cocking with the thumb, as this rested my trigger finger.

With the automatic, cocking is unnecessary and, with its lighter recoil, good scores in rapid-firing are very much easier to make.

The penetration of the nickel-coated automatic bullet propelled by its big charge of nitro powder is very great.

A man brought me a "pistol-proof" cuirass to test; I put a bullet at twelve yards clean through it and then through two "bullet proof" ones, placed one behind the other. (I used a regulation U. S. .45 Automatic pistol.)

This was before the war. The inventor was disappointed. He had experimented only with revolvers shooting soft leaden bullets and these his cuirass had stopped.

Unfortunately, in its present comparatively imperfect development, the automatic is the most

dangerous firearm of all pistols for a novice to handle.

The long barrel of a rifle can be struck aside if a beginner swings it round and points it at the instructor or a nearby spectator, but the short barrel of a pistol is easily pointed at and with difficulty brushed aside by the unfortunate person standing near a "brandishing" and "flourishing" man who is learning to shoot.

In spite of all warnings even those who ought to know better do this swinging about. In fact, it is the recognized way of handling a pistol; according to reporters, they always say So and So "was brandishing a pistol" if he happens to be armed.

You can test the truth of the above remark by asking any one to show how he would shoot a pistol.

He will raise his hand above his head and then jerk it down. It is very difficult to get any one to understand the danger and the futility of doing this.

Euclid tells us the shortest way from one point to another is a straight line. Why then, in order to get the muzzle of your pistol on an object, move it towards the stars first?

Never let the muzzle of any firearm, either loaded or unloaded, point in the direction where it would do harm unintentionally if discharged.

I, once only, in all my experience, found a beginner who did *not* do this, and the beginner was a lady!

After a few shots with a duelling pistol the wind blew the target down, the pistol was loaded and at full-cock in her hands. I had seen enough of how she handled a pistol, to know she had grasped the necessity of never pointing where there is danger.

The target blew down as she was beginning to aim at it; she raised the muzzle vertically and put the pistol at half-cock, I at the same moment going forward to put the target back in place.

With any other beginner I would have taken the pistol with me when I went up to the target.

Smoking is one of the greatest enemies to good shooting, even more so than alcohol.

A drinking man may, for a time, shoot well, till his nerves are destroyed, but smoking, long before it kills, makes a man unable to shoot well. He has too much twitch in his muscles.

It is curious how heavy smokers deceive themselves, and think it does them no harm.

At a dinner, a man told me that smoking could not possibly interfere with a man's shooting.

He said: "I can lift a tumbler full of water without spilling a drop."

There were plenty of tumblers and a decanter before him, but he took very good care not to demonstrate his contention.

I looked for his hands; he had one carefully out of sight, behind him; the other, with the eternal cigarette between the fingers, he was pressing tightly to his waistcoat, but not tightly enough to

prevent my seeing that his hand was trembling as if with the palsy.

Then, he added, to clinch his argument:

> It is all nonsense to pretend that smokers cannot stop smoking if they want to; I stopped for a whole week and the only thing was that I did not sleep and had no appetite; it was not worth it, so I began smoking again.

This is an extreme case, but all smoking, from the first whiff, is cumulative poison, deteriorating the nerves.

If a man gives up smoking and takes to pistol shooting in the open air, he will find his nerves enormously strengthened and, as long as he guards his ears from the concussion (which I will deal with later), his health much improved.

For elderly men also there is not the strain on the heart as in golf or tennis.

CHAPTER II

SPORT VERSUS SPORTS

When I wrote my book on revolver shooting, in 1900, I caused indignation amongst many, by saying that the time wasted over games would be better employed in learning to shoot.

I was told that, although pistol shooting might be amusing, it was "such a waste of time and of no practical use," and this by men who waste most of their time over golf!

Later, the Kipling poem on *Flanneled Fools and Muddied Oafs* came out, and there was an outcry as if one of the dogmas of the church had been assailed.

If games are so good for the health, why does one see so many young men with round backs and contracted chests, and heads poking forward, in England?

Until the war is forgotten, shooting men will be considered as making better use of their time than players of games, and the latter will not consider themselves superior to all others, and, figuratively speaking, carve footballs on the tombs of their heroes (as the feet were crossed on the tombs of

crusaders) to indicate the greatest deed of the deceased.

A great deal of this worship of "Sports" is the confusion, owing to the similarity of the sound and spelling, between "*sport*" and "*sports*."

"*Sport*" is the backbone of all manhood. It is the hunting instinct inherent in all healthy, normal males; it means the cultivation of skill in shooting and horsemanship, and men proficient in it are ready to rise in the defence of their country.

This is what "*sport*" means. Now, however, the term "*sportsman*" is employed to mean a man who has never fired a shot or swung his leg over a horse, but one who is merely a kicker or hitter of balls, or worse, one who sits sucking at a cigarette watching others playing games. The things he indulges in are called "*sports*," and it is "*sports*" which, before the war, were considered to overshadow all else, and were taught at schools and colleges.

A feeble old man, past active participation in "*sport*" can be, of course, excused if he keeps himself in health by playing golf, but a healthy young man should shoot or ride.

The general public, not knowing the training necessary before a man can either shoot or ride, imagines that there is no necessity to learn either.

They think that the moment a man puts on a military uniform he can ride in a cavalry charge, break wild horses, or hit a man a thousand yards off with either pistol or rifle.

Besides the absence of skill in shooting, there is not in such men the *instinct* to shoot.

A shooting man has in him the instinct of shooting, so innate that he aims and presses the trigger as instinctively as he lifts his foot when stepping off the road on to the curb.

He does not have to think at all.

If he is crossing a field in which there is a savage bull, when carrying a gun, rifle, or pistol, his only anxiety is not to be compelled to shoot. It might get him into trouble with the farmer. Any danger to himself from the bull he knows does not exist.

A man who knows nothing about shooting, even if given a loaded pistol, gun, or rifle, before crossing the field, would be more afraid of the firearm going off than of the bull, and, if attacked, would club the gun or rifle to hit the bull with, or would throw the pistol at it.

Painters of battle pictures depict soldiers using their rifles as clubs or pikes, not as shooting with them.

As an artist myself, I know one excuse for this.

You need a model who is a shooting man, to pose correctly for a soldier shooting. Such a model is expensive, but you can get any one to pose as a man clubbing with the butt end of his rifle.

When I say that every able-bodied man should know how to shoot, and that it is a disgrace if a man cannot both shoot and ride, I am answered: "Shooting is a gift, I could not learn to shoot if I tried all my life." This is nonsense. A man may

be more apt for it, which generally means that he has a liking for it; and this enables him to learn to shoot sooner and to become a better shot. But any normal man, and with even moderately good sight, can learn to shoot well enough to make of himself a very dangerous opponent.

It is the way shooting competitions are conducted (as I will explain later), which makes shooting so uninteresting to the average man.

It is to him like having to take a black draught of medicine.

I confess the usual shooting gallery has the same effect on me; I always pass by on the other side when I see the notice "SHOOTING GALLERY."

The constant paragraphs in the papers announcing a "did not know it was loaded" accident bear testimony to how ignorant the public are of even the elementary knowledge (I will not say common sense), not to point a firearm at another in play.

The public think that a bullet goes only where the shooter wants it to go, "You pull the trigger and the bullet does the rest" sort of idea.

They believe the bullet goes direct of itself to that object and stops there, when the trigger is pulled. They have no idea that the bullet may miss that object and hit someone beyond.

People will stand in the direct line of fire to watch a wounded buck in a park being shot, and are indignant if asked to move to one side.

They think it is absolutely safe to fire into the

air, even in a crowded city. They do not think that the falling bullet may do any injury.

As there is only slight danger from falling shot, this fosters the idea. They do not know the difference between a shotgun or rifle. Both are "sporting rifles" to them and a military rifle is a "gun."

A man does not put a razor to the throat of another in play, but he thinks it "humour" to take up a firearm, point it at another and pull the trigger.

The extraordinary thing is that if the "did not know it was loaded" man were taken to a range and asked to hit a target, he would miss it every shot, but he never misses his victim when he is playing at the game of "I did not know it was loaded." He kills his victim every time.

The reason is that the fool takes very good care to go up to within a few inches of his victim before killing him with his "I did not know it was loaded" joke.

Some people have no sense of humour.

They handle horses in the same way, but, fortunately, animals make allowance for ignorance in human beings but a firearm makes no such allowance. Therefore there are fewer accidents to human beings from horses than from firearms, in proportion to the silly things the humans do.

A dog will allow a small child to poke its fingers in its eyes. If a grown person attempted it he

would get bitten, but a pistol makes no such distinction.

I was being shown round a remount depot where the horses were picketed out with a hind leg tethered to a peg, when a sour-looking, underbred artillery horse, began kicking at his neighbour.

The horse kicked himself free and trotted off to the corner of the field, where he stood, sulkily, with his ears laid back, a piece of rope wedged between his near hind shoe and the foot.

A man was ordered to bring the horse back. He was wearing a pince-nez of very near sighted type.

Now what he ought to have done was to first catch the horse, taking care not to get kicked whilst doing so, then to hold up a fore leg (so that the horse could not kick), whilst someone else removed the bit of rope from the hind shoe, standing to one side.

Instead, he walked up straight behind the horse. When he got within a few yards of him, to my intense horror, he went down on his hands and knees and began crawling towards the horse's hind legs.

The horse had been laying back his ears and showing the whites of his eyes and measuring the distance for a kick at the man.

This manœuvre on the man's part, however, so surprised the horse that he stood quite still, looking at the man enquiringly.

The man crawled up close to the horse's heels,

took out his pocket knife and, putting his nose within a few inches of the horse's near hind foot, quietly sawed away at the piece of rope with his blunt pocket knife and jerked the ends out from between the shoe and hoof. The horse stood like an angel all the time.

The man to this day has not the least idea he ran any risk or performed an act worthy of the V. C.

The horse evidently thought such a fool was not worth kicking. There is no fun kicking a man who is not frightened.

CHAPTER III

WHY PISTOL SHOOTING IS UNPOPULAR

GAMES, or "*sports*" as they are called, would not be popular if they were conducted on the same lines that pistol shooting usually is.

Pistol shooting is made as dull and uninteresting as possible, and then surprise is expressed that hardly any one takes a pistol in his hand, except when compelled to do so, and that shooting galleries do not pay.

Small white squares of cardboard, a minute black spot in the middle of each, are put up at various distances. You are told to aim at this spot. If you hit it it counts so much, if you miss it, the further from it you perforate the paper, the less points you score.

When you have fired a certain number of shots, the total is added up and you go on again.

Occasionally, you have the mild excitement of being allowed to do this in competition, and a "spoon" is given you if you make top score, paid for out of your own money less a percentage which the gallery keeps.

Your skill does not avail you long, as the next

time you shoot, by however many points you have won, by that number of points you are handicapped, so it is possible that if you get *very* proficient, you can have the pleasure, when making all bull's-eyes, of being beaten by a man who has not made a single bull's-eye, and beats you by handicap, and the list of spoon winners appears in the papers with his name on top and yours at the bottom, and people say, "How badly X shoots."

This is not very encouraging to X or conducive to a desire to gain proficiency.

However bad a shot you are, you have an equal chance of winning this spoon.

Even the possibility of gaining a spoon applies to only a few shooting clubs. The shooting galleries in black cellars, do not give prizes. You are supposed to be fully compensated, after being deafened by a man with a full charge revolver or automatic pistol blazing away into the darkness beside you, by paying for your targets, ammunition, and hire of a greasy revolver with a trigger-pull hard enough to break your finger and a report like a cannon, whilst you strain your eyes to see a black front sight in the darkness.

There is no sport, or comfort, in all this. Under such circumstances nobody can be blamed if he gives up pistol shooting in disgust.

I shall describe later, how a gallery should be built (see Plates 15 and 16), or an open range planned and conducted, but I here merely indicate

why pistol shooting in England is deservedly unpopular as at present conducted.

There should be no handicapping. Being able to shoot well should be an incentive, not a handicap.

Next, there should be the excitement and amusement of a game.

Who would go to look at a game conducted under the following conditions?

Sit in a room with all the lights out, with a faint glimmer at the far end.

Hear incessant, deafening noises.

Nothing else but noise for an hour or two, except occasionally a pause whilst the black spot in the distance disappears and then reappears.

Finally a man reading from a piece of paper announces:

X.....40 points, First.
Y.....39 points, Second.
Z.....38 points, Third.

Then you go home.

Some drudgery in learning has to be gone through with, but it should be in a good light out-of-doors, and this drudgery is only while learning. It should not be continued all through a man's shooting career, and be considered "pistol shooting."

As I will show, shooting can be made intensely interesting to both spectators and participants.

The present style of shooting competitions leads many sportsmen to say: "I love shooting, but I hate target shooting."

CHAPTER IV

THE WRONG WAY TO LEARN

PISTOL practice varies in different countries.

As duelling is still general on the Continent, practice with the pistol is conducted differently to that customary in the United States or England.

On the Continent most men of the upper classes have at least a rudimentary acquaintance with the foil and duelling pistol, but in the English-speaking nations a man has rarely ever handled or even seen a duelling pistol, or the few who have done pistol shooting have never shot except at a stationary bull's-eye target.

At the English National Rifle Association at Bisley, the attempt was made to induce men to practise at moving, rapid-firing, and disappearing targets, as well as advancing and retiring ones, but these had reluctantly one by one to be given up, owing to there being so few men who cared to shoot in such competitions.

In the days when I used to compete regularly at Bisley, I do not think there were more than half a dozen of us who competed at the sliding target, and even fewer at the rapid-firing one.

We, in those days, used revolvers and black powder, which made such shooting very difficult owing to the smoke obscuring the target.

I give at the end of this book the best targets, full size, made in these competitions which will now remain permanently the best on record, as the revolver and ammunition are no longer made. They will rank with the "High Wheel" trotting records as "Hors Concours."

Any one who wishes to compete in revolver-shooting competitions in England must modify my teaching in the preceding chapters, and refer to my *Art of Revolver Shooting* for details of competition.

The duelling pistol is not used in England, but there are many revolvers still in use there; England is the last country to use the revolver in the army, and is the last refuge of the revolver, just as Yellowstone Park is the last refuge of the buffalo.

For competition in England, practising will have to be done with a revolver, not an automatic pistol, and a deliberate aim taken at a black bull's-eye on a white target.

In the United States, the automatic pistol is the sole weapon now. Several Challenge Trophies, which I modelled and presented to various associations, have had to have their conditions altered to "automatic pistols" from "revolvers," and as the automatic inevitably tends to rapid shooting, the days of stationary target shooting are numbered.

Many people defend shooting at a stationary target, on the plea that one must learn one's alphabet before learning to read.

This is correct *as far as it goes*, but they carefully omit to add that after a boy has learned his alphabet, he goes on to reading, and writing. He does not merely repeat his alphabet all his life.

Just the same argument is used by those who say that blundering through Greek and Latin, with the help of a dictionary, teaches modern languages; that these latter are "so easy after a grounding in Latin and Greek."

If it is so easy why do they not learn modern languages. They cannot speak a word of any language but their own, and even the few sentences of Latin and Greek they can parrot-like repeat, no foreigner can understand, as they pronounce them with the English vowel sounds. For the same reason they mispronounce all foreign names.

A Russian who cannot speak French and German as well as his own language is considered entirely uneducated.

A man may be a crack shot at a stationary target and yet be absolutely useless with his pistol in case of having to use it in a hurry at anything in motion.

If you want to learn something, learn it, do not learn another thing, so as to be prepared to learn something else later on, *if* you care to.

If you want to eat a peach do not first drink

ten plates of soup, and eat a leg of mutton, or you may not have the time or desire to eat the peach.

If you want to learn practical pistol shooting, learn it, do not waste time learning unpractical shooting.

You not only waste your *time*, but you spoil your "*timing*," which is the great thing in pistol shooting, and also your sense of direction. You get into the habit of putting up your pistol and then searching for the bull's-eye, instead of having it all come by instinct, like putting your spoon into your mouth.

I can tell a man who is not a practical shot, by the way he first finds his sights, and then hunts round for the target with them. If it were a live target, it would have made itself scarce while he was searching for his sights.

CHAPTER V

PRELIMINARY INFORMATION

In revolver shooting there was the danger of making a bad shot through a badly fitted or dirty cylinder not turning quite into place, and causing a shaving of lead to be taken off the bullet as it passed into the barrel.

I was once trying a new pattern revolver, and made a very bad shot, although I knew I had let-off well. I opened the revolver, and a thin shred of lead fell out, showing the bullet had been deformed as it entered the barrel.

A bad shot from such a cause cannot happen to an automatic or a single-shot pistol.

A near-sighted man is at more disadvantage in pistol shooting than in rifle shooting.

With a rifle the hind sight can be fixed to the barrel nearer, or further from the eye until it is at just the right distance to suit the shooter.

The pistol must be held at the full stretch of the arm, or else one will get a blow on the nose, and will not be able to hold steadily.

A long-sighted man can continue pistol shooting without having to wear glasses long after he has to use them for reading.

A near-sighted man finds the hind sight too far for him to see it clearly, and then makes the fatal mistake of shooting with a bent arm.

This not only prevents accurate shooting, but he is very apt to get the hind sight into his eye from the recoil of a kicking automatic.

The arm should be held straight and extended to full stretch, so as to point the pistol by sense of direction, just as a well-fitting shotgun stock enables the shooter to aim without consciously paying any attention to the sights.

Use the pistol exactly as you would use a shotgun. It is this want of knowledge of shotgun shooting which makes men shoot a pistol as if it were a rifle being used at a stationary target.

These men only understand lying down with a rifle, and poking about with the sights to find the target after they have put the rifle to their shoulder. Some have a lot of incantations first; they aim at the sky, bring the rifle down slowly, and then make a bull's-eye on the wrong target as they naturally cannot know which is theirs of a string of targets, if they only fish about looking through a pin hole for it; they know nothing of the possibilities of a rifle or pistol, unless they are shotgun shooters as well.

The public consider "I did not know it was loaded" as ample and full excuse when one man shoots another in a so-called "accident."

Not to know if the firearm you are handling is loaded is *an unpardonable crime*. It is so simple

to open the firearm and see for yourself. I never take the owner's word for it if he tells me a firearm is not loaded. Before I handle it, I examine it for myself.

The public think that no one but an expert can possibly know if a firearm is loaded; that the only way to know is to pull the trigger, and if any one happens to be shot, well, that is unavoidable and nobody is to blame.

It is to try to partly remedy this danger (it is impossible to make any firearm or instruction in its use "fool-proof") that I ask any one who takes up this book to read the two following chapters, even if they take no interest in shooting. It may save a life.

Everything we do is a compromise, and nothing human can be made perfect in all particulars.

I give my ideas of what is wanting in automatics, not from a mechanic's point of view, but from that of the one who has to shoot them.

Few mechanics are shooting experts. They make beautiful pistols from a mechanical point of view, but which are clumsy and unpractical from the shooter's point of view.

Early inventors of automatics were not practical shots.

The inventor of one of the earliest automatics came to me with his invention. It was utterly impossible to handle or make any good shooting with it. It was like trying to eat soup with a fork. He kept telling me that if I "held it like this" and

"did this," I should be able to shoot with it, but it was as if he had told me if I sat with my face to the tail of the horse and held on by his hocks, I should be able to ride better than the usual way. Besides being of a most unwieldy shape, to grasp which you had to spread your fingers in all directions, this pioneer of the automatic pistol had all sorts of levers which must be moved by your different fingers in order to shoot it, as if you were playing the cornet.

Inventors, instead of evolving a pistol from their imagination, should consult an expert pistol shot, as to what improvements on existing pistols are required.

We are told by writers who use the fashionable word "imagination," that to do anything, from governing a Nation to destroying submarines, "All that is needed is a man with 'Imagination.'"

"Imagination" may do many things in legend or story but it will not teach a man pistol shooting, or enable him to invent an automatic pistol. I put experience and technical knowledge before "imagination" and theories.

In rifles there is the same sort of difficulty. It took me years before I found a gunmaker who would try to make a rifle on the lines I consider desirable for big-game shooting.

Big game is shot at short range, so flat trajectory is of no importance. What is important is to have a rifle which is light and well balanced and yet will knock down an animal with a terrific blow

at close range. One does not want the sort of rifle so largely advertised as an ideal rifle for big-game shooting—a rifle which weighs as much as an arm-chair, balances like a poker, kicks like a horse, and is warranted to shoot into a two-inch bull's-eye at four hundred yards, but is impossible to align on a rapidly moving animal at a few yards off, owing to its clumsiness and weight.

Inventors of firearms expect their customers to adapt themselves to their weapons instead of making the weapon to fit their customers, and answer to their requirements.

I stopped a man just in time, taking a Lea-Metford to shoot rooks with!

I was lecturing on the cruelty and uselessness of docking horses, amputating the bones and nerves of the horse's tail and searing it with a hot iron, and what for? A man in the audience stood up and said: "If I did not dock my horse he would be too long to fit between the shafts of my cart."

This is just the inventor's attitude:

> You must shorten your trigger finger by cutting off the first joint. I cannot alter all the blue prints of my invention just because you find the trigger too far back for your finger. Your finger is too long; my invention is perfect.

As a shooting man, not a gunmaker, I may suggest improvements impracticable to make with present means, but it was not by saying

machines heavier than the air cannot be made to rise that the aeroplane was evolved.

It will be found that I have modified and even entirely changed some of my ideas since I published the *Art of Revolver Shooting* in 1890.

This is of course inevitable: one lives and learns, and I have learned much on the subject since then. Mechanical improvements have altered and eliminated difficulties which I had to teach how to avoid twenty-eight years ago.

On the other hand, new difficulties have arisen which have to be combated.

Those who cribbed from my former writings made a great mistake, and instruction which was quite right for revolvers is wrong for automatics. The position of the thumb, for instance, or the filing of the sights (which, almost without exception, these compilers of books have taken without acknowledgment from my *Art of Revolver Shooting*), are not applicable to modern pistols.

The best way to learn pistol shooting is to have an expert stand beside you, but, lacking this, the only way is to read a book by an expert.

It is very easy to write and to pose as an expert by the use of scissors, but it is rather hard on those who wish to learn, and also on those whose ideas are taken and used without acknowledgment.

I do not think any expert could write a book on pistol shooting using quotations, as each man has his own system.

CHAPTER VI

HOW TO PREVENT ACCIDENTS

It is no use carrying a pistol in your pocket for self-defence, and to have it go off and kill yourself, or much worse, shoot the person you are trying to save.

The first, foremost, and last thing is never to point the muzzle towards anywhere you do not want a bullet to go.

Never mind if the pistol is empty, treat it as if it were loaded. "I did not think it was loaded" or "he was cleaning the pistol and it exploded" are the stock excuses when an accident occurs.

Firearms to the non-expert "explode" at odd moments, and nobody is to blame; he thinks it is the nature of a pistol to "explode" spontaneously.

I cannot myself understand how a man can clean a loaded pistol, as by cleaning I understand getting the fouling, nickel, etc., out of the bore of the pistol, and the cartridge must first be extracted to do this. But I suppose a man not used to a pistol would mean by cleaning, polishing the outside, raising the hammer, and then putting a rag through the trigger guard and pulling it back-

wards and forwards against the trigger with the butt of the pistol resting on his knee and the barrel against his chest.

He of course does not first open the pistol to see if it is loaded; he leaves it for the inquest to decide "that he did not know it was loaded."

I am not writing for such people; they are better shot and out of the way, else they might hurt others.

The second thing is never to load the pistol except when necessary.

Most people buy an automatic, get the gun-maker to load it for them, and put it in a drawer or their pocket, and keep it like that for years, or worse, leave it lying about loaded.

A pistol must be periodically cleaned. If it is kept loaded for years, it will probably jamb if any one attempts to fire it.

A pistol kept loaded *is a constant source of danger to everyone, including the owner.*

I knew of a case where a revolver was kept loaded by a bedside for twenty years and thrown into a trunk each time the owner went on a journey.

After the owner's death, I was asked to see if the pistol was safe.

It was lying in its case beside the bed, and when I opened the case I found the barrel was lying so that it pointed at the head of any one sleeping in the bed.

I found it loaded in all the chambers, the hammer let down on one of the caps so that its

sharp point, by constant friction, had polished and nearly worn through the cap.

I took it into the garden and fired that cartridge.

The hammer had during all those years rested on this cap and the least tap on the hammer would have fired it. Each time it was thrown into the trunk it was a mercy it had not gone off.

If it had remained on the cap much longer, the sharp nose of the hammer would have reached the fulminate and fired the revolver.

Here was a case of a loaded revolver, like the sword of Damocles, threatening the life of its owner all night long, every night, though it was put by the bed as a safeguard.

The hammer should have been put down on an empty chamber.

However, to repeat, never point a pistol under any circumstances at anything you do not want to shoot.

Never have it loaded except when absolutely necessary.

Now as to when it is necessary to have it loaded. Most people are much safer if they *never load it.* If you want a pistol to frighten burglars with or to carry in dark lanes at night, get a *brightly plated nickel* one. The larger you can carry the better. *Do not buy any cartridges for it.*

If you get the gunmaker to render it impossible to fire it, even if loaded, so much the better.

You can stop any but the most desperate man

by "brandishing" this at him in approved theatrical style.

I know of a jeweller who stopped a highwayman by pointing the nickel plated pump of his bicycle at him.

During the war a man took a number of the enemy prisoners by threatening them with his empty revolver.

For people who know nothing of firearms it is much the safest plan not to have any cartridges.

Never allow "ornaments" shaped like pistols to lie about.

People get so used to playing with these that they at once point a real pistol when they can get hold of it.

Even when a pistol has to be fired it only needs to be loaded just before being used, as a rule.

When target shooting, it need only be loaded the moment before getting into position for shooting. If all the shots are not immediately fired from this position it should be at once unloaded.

I saw a most disgraceful neglect of this precaution at a shooting meeting, which if the Range Officer had also seen, the man would have been expelled from all meetings. He was an expert revolver shot too!

Several of us had made very good scores with the revolver at a stationary target.

This man came up carrying a hand bag in which his revolver and cartridges were kept.

"I have a few minutes to spare before my train

goes, and I will have another try to beat you"; so saying he took out his revolver and cartridges, handed in his ticket, loaded, and began a score. He made three bad shots, swore, then without taking out his cartridges, he just opened his bag, put the revolver in, shut the bag and went off.

Never touch an automatic pistol until you are expert with a single-shot pistol. I do not mean expert to make good scores, but *absolutely safe* not to point it at any one, and able to take out the cartridge with safety or to put the pistol at safe or half-cock.

We will suppose you have the single-shot pistol and cartridges, and the target in front of you with a sufficiently large background that it does not matter where your bullet goes if you keep your muzzle always pointed in that direction.

It is almost impossible to have a range absolutely safe against an accidental discharge putting the bullet over the butts.

A man who swings his pistol over his head is almost sure some day to let off a bullet high over the butts if he does not blow his own brains out first.

If the shooter pays attention all the time to keeping the muzzle of his pistol pointed towards the butt he will be safe even if his pistol goes off accidently.

The barrel must be aligned towards the butt. Most beginners think that, if they see the muzzle of the pistol against the butt, it is aimed at the

butt. That is not so. You can hold a pistol almost vertical like a candle in its socket, and think the muzzle covers the centre of the target, but if it is fired in this position the bullet will go straight in the air.

To aim a pistol, the breech (the part nearest the butt of the pistol) must be aligned with the muzzle on the target.

Keep the pistol lying on a table before you and pointing at the butt, and when you lift it always keep it thus horizontal or slightly inclining towards the ground but always pointed at the butt.

All single-shot breech-loading pistols open by pressing a lever, whether on top, at the side, or underneath the barrel.

Press this and open the pistol, look through the barrel to see that there is no cartridge in it and that the barrel is clear, and then close it.

Do this constantly for many days, so that you get into the habit the moment you take the pistol in your hand to look through it to see if it is unloaded, and no obstruction in it. To fire a pistol which has an obstruction in the barrel may burst the pistol.

If any one asks to see the pistol, first open it in his presence, of course pointing away from him or any one else, and look through the barrel before handing it to him. If an automatic, first take out the magazine and open the barrel as well.

Unless he is a shooting man do not hand him any cartridges. If he wants to see what your cartridges

are like take the pistol back, open it again and see that it is still empty, put it away safely, and *then* hand him a cartridge to examine.

All this may seem super-caution but it is necessary, especially with an automatic, and unless you do this by instinct with the safer single-shot pistol, you may at any moment have a dreadful accident with an automatic for which you will be sorry all your life.

Now, standing facing the butt, open the pistol, put a cartridge in it (an empty cartridge case, not a loaded one). Put the pistol, if it has an outside hammer, to full-cock, being very careful to keep it pointed at the butt, lower the hammer to half-cock, open the pistol and extract the cartridge, and close the pistol again; repeat this many times till you can cock and half-cock without the hammer slipping or falling by accident.

If it had a loaded cartridge in it the pistol would go off should you let the hammer slip down, which is one of the most frequent causes of accidents with pistols having external hammers.

Some hammer pistols have a rebound, that is, when the hammer falls it rebounds to half-cock.

CHAPTER VII

HOW TO PREVENT ACCIDENTS (*Continued*)

Do not forget the hammer has three positions. Down on the cartridge, "half-cock," and "full-cock." The latter is when the pistol is ready to be fired, when at half-cock it cannot be fired by pulling the trigger and is supposed to be safe against accidental discharge, but it can be fired accidently if, in raising the hammer to full-cock it slips, owing to clumsiness or a greasy hammer or thumb, or the hammer may get caught in something and be raised accidentally.

For this reason it is best to have the part of the hammer the thumb presses against in cocking corrugated, roughed like a file.

Take the barrel in the left hand, holding the pistol horizontally pointing at the target.

Take the grip in your right hand, put your right thumb on the projection of the cock (not from straight behind it but slightly from the right side); this enables you to get a firm grip of the hammer and at the same time of the stock with your other fingers.

Now, do *not* do what all beginners do.

Do not put your first finger on the trigger when cocking. Keep all your fingers outside the trigger guard to avoid any chance of your touching the trigger when cocking.

There are two causes of accidental falling of the hammer in cocking and so causing an accidental discharge of the pistol.

One is the hammer slipping from the thumb, or being released by the thumb before it is fully at full-cock.

The other is pulling at the trigger at the same time that the pistol is being cocked (which learners invariably do).

The result of pulling the trigger at the same time is that the hammer does not catch into the bent which holds it, and falls as soon as the thumb is removed.

There is a click when the pistol is well at full-cock, which tells you the pistol is properly cocked, the hammer or cock goes slightly beyond full-cock and then comes into place by a click. (See quotation from Byron's *Don Juan* on a later page.)

To put to half-cock is the most ticklish of all and is the cause of most pistol accidents.

The thing to do is to let the hammer fall to just below half-cock and then bring it back to half-cock. If it falls too low it fires the pistol, if it does not click it has not properly got to half-cock.

Still holding the barrel of the pistol in the left hand and the grip in your right (keep the pistol carefully pointed at the butt where an accidental

discharge would do no harm), put your right thumb on the hammer. When you have a firm touch of it so that it cannot escape you as it falls, put your first finger on the trigger and press, but *only* for an instant.

The hammer will fall but you must keep it from falling fast, by holding back with your thumb. Lower the hammer down to just below half-cock back to half-cock and then release your thumb hold.

If the hammer went its full fall it would explode the cartridge. With a rebounding hammer, the hammer falls and instantly springs back to half-cock. Therefore in letting a rebounding lock down from full to half-cock, if you are able to restrain it well during the first part of its descent, even if it slips from your thumb before it is quite at half-cock, the rebound overcomes the downward fall and it rebounds to half-cock without actually exploding the cartridge because it does not quite reach it.

Half-cock is the safest position for a loaded single-shot pistol but not safe enough to carry in a pocket or holster loaded. For that, it needs a safety lock to hold it at half-cock.

As you gain confidence you will find that, with a rebounding lock (such as all duelling pistols of full-size calibre by the best makers have), it requires very little holding back at the hammer in letting it down to half-cock and the hammer remains at half-cock by itself, without any click.

With an ordinary hammer which remains down when it is fired (like many single-shot pistols of American make or the .2 bulleted caps of the "Flobert Pistol"), the hammer must be kept firmly held until it is below half-cock, and then brought to half-cock where it will click, as it also does at full-cock.

The great advantage of an automatic pistol is that it does not have this click and so does not give warning to an adversary and is not apt to go off by accident when being put at safe.

If the trigger is held back whilst cocking it is as if you were to ask a man to sit down and pull the chair from under him. He falls just like the hammer.

Almost all modern pistols with visible hammers have rebounding locks so that after the hammer falls, on the trigger being pressed, and explodes the cartridge, then it jumps back to half-cock of itself. This saves time as otherwise the hammer resting on the exploded cartridge would have to be raised by the thumb to half-cock before the exploded cartridge could be extracted and a fresh one put in.

Now, practise till you are perfect, using an empty cartridge.

Open, insert cartridge, close, put to full-cock, lower to half-cock, extract cartridge, close pistol.

Do not be satisfied till you can do all this without a hitch or hesitation and without letting the hammer slip.

When you do this perfectly you can go on to the next lesson, but not before.

When you have the pistol at full-cock, it can be fired by pressing the trigger, but we have not come to that yet. We are only learning how to safely handle a pistol.

CHAPTER VIII

TRIGGER-PULL

VERY few people pay attention to the strength of the trigger-pull of their pistols.

They accept whatever trigger-pull it has when they buy it.

They do not know that trigger-pull can vary from a hair trigger up to many pounds weight.

First-class gunmakers make the "weight," as it is called, of their trigger as light and smooth as possible subject to its being safe to handle.

The subject of safe trigger-pull is a variable quantity.

An expert shot can be trusted with a trigger-pull so light that in the hands of a less skilful or careful shot there would be great danger of the pistol being discharged accidentally. The automatic pistol is put to full-cock automatically with violence, by the discharge. Therefore the trigger-pull has to be made much heavier than the trigger-pull of a single-shot pistol, where the shooter cocks it gently with his own hand.

A typical example of how men, even after a life-time of shooting, pay no attention to the weight of their trigger-pulls occurs to me.

An old gentleman, belonging to one of the learned professions, who had been an enthusiastic but very bad shot all his life, asked me to try his shotgun at some clay pigeons.

He was one of those men who always pride themselves on getting things cheaper than any one else.

He did not understand that a good gun is expensive; and that a second-hand gun by a first-class maker is much better value (and safer to use) than a cheap new gun.

Acting on his usual principle, he had bought a gun very cheap, "a splendid bargain which I have used the last ten years. I am not as strong as I once was so I bought a featherweight one."

To buy a light, cheap gun is extremely dangerous. Only a very first-class maker can reduce the weight of a gun to its limit without risk of a burst, and the materials must be flawless.

When I saw the gun I was sorry I had offered to shoot it. The barrels looked fearfully thin at the breech, of inferior metal, and rattled from bad fitting, when one succeeded in closing the gun.

The weakness of the gun, however, was made up by the strength of the cartridges, which were for pigeon shooting, and loaded with a full 1¼ ounces of shot and an enormous charge of nitro powder.

The gun had the proof mark for black powder only!

He was delighted with his cartridges and told me he had bought them at a great bargain from

the executors of a celebrated pigeon shot recently deceased.

I ventured to suggest that it might be dangerous to shoot such a heavy charge of nitro powder out of a very light gun proofed only for black powder.

He said: "That's nothing, I am not as active as I was and I was told these cartridges would kill much farther than lighter loaded ones, and how cheap they are!"

I, with many misgivings, had a clay pigeon thrown, but the gun refused to go off.

I took out the cartridges and tested the trigger-pulls by feel.

They were like lifting a coal scuttle.

I said to him: "Do you know what your trigger-pull is?" He did not understand what I meant. I used a trigger-tester. They were well over nine pounds each. A shotgun generally has 2¼ for front trigger and 2½ for back trigger.

I had another pigeon thrown.

I took a hard tug at the trigger and the gun went off with such a recoil that the stock nearly jumped off my shoulder. I do not know where the charge went; the pigeon was almost out of range before I could get the trigger to act. (I learned the cartridges had been stored near the kitchen fire!!!)

This was enough for me and fully explained why the old man, whilst shooting all his life, had never become expert.

First-class gunmakers see to the trigger-pull so

as to make a compromise between a nice, light trigger-pull and one safe to use.

Military rifles are made with a very heavy trigger-pull in order to make them safe to be handled by men who have rough, hard hands from manual labour.

This, in my opinion, is a mistake. A very heavy trigger-pull prevents accurate shooting, because the rifle is always going off later than you want it to and encourages hanging on to the trigger.

The man gets into the habit of pressing on the trigger when he is not shooting. He knows the rifle will not go off unless he gives a tug at the trigger.

With a light trigger, a man knows that he must keep his finger clear of it, or he will fire his rifle accidentally.

When learning the handling of the single-shot pistol (the automatic must not be touched till the learner is familiar with the single-shot), blank ammunition may be used.

The learner is very apt to discharge his pistol unintentionally, and the fright caused by firing a blank cartridge by accident will impress on him to be more careful in the future, before he had a loaded cartridge in the pistol, which might cause a fatal accident if discharged unintentionally.

As the automatic cannot be made with as light a trigger-pull as a single-shot pistol, it becomes a question as to how light the trigger-pull of your single-shot pistol should be.

If you want to make the best possible shooting

with it and to make your lessons as pleasant and as easy as possible, have as light a trigger-pull as your gunmaker (not an ironmonger who sells fire-arms) recommends.

If, however, it is important that you should learn an automatic pistol well, and the single-shot pistol is only used for getting familiar with fire-arms, then have the trigger-pull adjusted to be as near as possible, not only of the strength, but of the character of the automatic pistol you intend to use later.

Two triggers of the same weight may vary greatly in the feel and sweetness of the pull.

One may drag or grate. The other seems to go off at your mere wish.

No automatic can have the delicate touch of a single-shot pistol. It has to withstand such rough handling by the mechanical loading of the explosion.

A thing to be especially remembered is that one who is not expert, trying to put the pistol to half-cock, ruins the trigger-pull and renders it unsafe.

The point of the seer can be broken off or distorted by someone fumbling with the trigger and hammer.

Do not let people touch the hammer or trigger of your pistol, any more than you would let them jerk your horse's mouth.

In the course of your first trials in cocking, putting to half-cock, etc., you will probably injure your trigger-pull more or less, and should you feel

the least alteration or grate in it, have it examined by a gunmaker before worse mischief occurs.

With a hammerless (*i. e.*, pistol with invisible hammer inside the lock) there is not this danger. Cocking is accomplished by the act of closing or opening the pistol which at the same time causes the hammer to be locked at safety.

What corresponds to cocking and putting to half-cock is accomplished by sliding the safety bolt to the firing position, or to "safe."

It is advisable to have the same weight of trigger-pull on all your pistols. If they vary it makes it difficult to shoot equally well with all. The heavier trigger-pull of some will hamper you, and the lighter trigger-pull on others may make you discharge them before you mean to.

As individual fancy in trigger-pull varies, some makers sell their pistols with intentionally a very heavy trigger-pull, so that their clients can have it regulated to their requirements. This probably was the reason my old man had such a heavy trigger-pull on his "greatest bargain I ever saw" gun.

Before practising for or entering a competition, see that your trigger-pull complies with the regulations, as nothing is more annoying than, after making a winning score, to find your trigger-pull is too light and your score in consequence is disqualified.

It is best to have the trigger-pull well over the minimum so as to allow for its getting lighter during shooting.

CHAPTER IX

AMMUNITION

EVERY make of pistol has ammunition which suits it best. In fact, to shoot what was made for it. In the case of automatic pistols, they will not work properly unless their own ammunition is used.

It is very dangerous to shoot the wrong ammunition out of a pistol. It may burst it. I nearly had such an accident with a revolver when winning a prize given for the best score with a certain make of powder.

I found the pistol working very stiff in the revolution of the cylinder, toward my last shots, and when I had finished I looked and saw that the cylinders had become egg shape, caused by the pressure of the explosion, which was greater than the powder-charge the pistol was made to withstand.

It was only the excellence of the material which caused the cylinder chambers to expand toward their weakest point (the circumference of the cylinder), instead of bursting.

It was this expansion that had caused the friction in turning the cylinder.

As my book is not a gunmaker's catalogue there is no use in giving illustrations of ammunition.

Such illustrations are neither artistic nor of any interest. Many makes of cartridges are long since obsolete and only linger in catalogues because the old blocks happen to still exist and can be used to fill up a catalogue and make it "fully illustrated."

Any one conversant with pistols does not even glance at them. When he buys the pistol, he also buys the cartridge made for it. He does not buy a pistol and then try which make of cartridge will fit into the chamber.

A cartridge should fulfil the following conditions:

First of all, it should be safe against accidental explosion, such as dropping or when feeding through the magazine of an automatic pistol. Next, the case should not split or swell when fired, so as to make it difficult to extract.

Next (this is a matter also of the construction of the pistol), it should not blow back fire into the eyes of the shooter. This has several times happened to me with cheap makes of rifles and pistols and one is very apt to have such an accident when shooting at bottles at a fair with cheap worn rifles.

I asked a woman attending at one of the shooting booths at a fair, if it was not very dangerous when drunken men came to shoot.

She answered: "Oh no, when a man looks dangerous I load only blank ammunition for him."

The chief requisite is accuracy; and without accuracy a cartridge is useless.

CHAPTER X

FIRST LESSONS

As the automatic pistol is a very dangerous one for a novice to handle, it is best for the beginner to first thoroughly master a single-shot pistol.

There are several styles of single-shot pistols (see Plates 2, 9, 10, and 17). I will not give a list and description of all makes, like a gun-maker's catalogue. I will merely describe a few of the typical ones. Very many are not only obsolete but of no use, and I do not intend to describe any pistol or ammunition merely to condemn it.

All that I describe have some merit, and most of them have great merit. Still if there is any ammunition or pistol left out, you must not at once jump to the conclusion that I consider it bad or dangerous; it may be that it was omitted through an oversight.

It is best to have a pistol light in weight and shooting as small a charge as possible, so that there may be no great weight to hold up and no flinching from the noise or recoil.

PLATE 2. BREECH-LOADING PISTOLS
(By Gastinne-Renette)

With a very small charge it is possible to use a very light pistol, and though this is advisable for a beginner still, weight in a pistol, even if it shoots only a very small charge, is an advantage for accurate holding.

The trigger-pull must not be lighter than 2½ pounds for safety (especially for a beginner) and if the pistol weighs less than 2½ pounds, it is very difficult to press the trigger without disturbing the aim.

Lightness in weight of the pistol is also often obtained by shortness of barrel, and to shoot a pistol with only a two or three inch barrel is the supreme test of skill in pistol shooting and a useless handicap to a learner.

At one time I thought it impossible for good shooting to be had out of a two inch barrel, but a friend and I tested this at twenty-five metres, and we both, after a few trials, got strings of shots on the chest of a life-sized figure of a man target.

But it requires a man who has shot for many years to be able to do this; even an average shot goes very wide and wild in his shooting with such a short barrel.

These very short barrels are therefore useless for the general public for self-protection, except when the pistol actually touches the opponent.

Even the short police pistol requires a lot of learning. Most people imagine it is merely necessary to buy a little pistol "which I can put in my waistcoat pocket," to become burglar proof.

This sort of thing is worse than useless. If you leave a man alone he will most likely leave you alone, but if you annoy him by banging at him, he may lose his temper and hurt you.

A reasonably long barrel is therefore necessary for a beginner, and a reasonably heavy weight.

The cartridges may have light loads. Unfortunately the easiest pistol of all, to shoot, is now impossible to be had except from a dealer in a second-hand firearms. I mean the "Flobert" duelling pistol, formerly made in France and Belgium, shooting bulleted caps of about .2 calibre.

The duelling pistol, in all its calibres, is the best balanced and easiest to shoot of all pistols (see Plates 2 and 5).

The stock is at just the right curve and angle, is large enough for a big hand, and yet does not feel clumsy in a small hand.

By taking the grip of the hand higher or lower, the same effect is produced as in having a gunstock straighter or more bent; one can, therefore, by altering the grip of

PLATE 3.
Author's winning score for Gastinne-Renette Competition, April 7, 1910.

the hand, find a place to hold which makes the pistol come with the sights aligned on raising it, just as a well-fitting gun "comes up."

Next this pistol balances perfectly. The length of the barrel does not make it top heavy, as the barrel is fluted, to lighten it forward, and the stock weighted.

Most pistols, automatics especially, are muzzle heavy. There is really no pistol except the duelling pistol which balances properly, and the automatic will have to be altered in this respect before it can become the ideal weapon for rapid shooting.

The ideal pistol is the Gastinne-Renette duelling pistol, which is of .44 calibre muzzle loader or shoots a centre fire cartridge, with French "Poudre J" and a round bullet (see Plates 2 and 9).

This is the most accurate pistol in the world and a number of men have made a score of 12 shots in a bull's-eye the size of a sixpence, in succession at 16 metres (17 yards 1 foot).

This pistol has very little recoil. If the beginner cannot get a "bulleted cap" duelling pistol the ordinary .44 gallery ammunition duelling pistol will do almost as well.

Now arises the question of expense, as these pistols are expensive.

If economy is necessary, then the only way is to get one of the American single-shot pistols and add wood to the back of the stock, so that the grip comes further back and the trigger is thereby

further from the hand and allows the trigger finger to be extended.

Then either cut down the barrel to lighten the pistol forward, or have flutes made in the barrel to take weight of the metal off, and put lead in the stock.

I have described the ideal way of learning to shoot a pistol but of course any single-shot pistol which does not have too heavy a recoil will do to learn with, so as to become a fair shot.

With the long reach to the trigger of the French duelling pistols the trigger finger can be held outside and along the trigger guard (as with a shot-gun when walking up birds). With the trigger so far back, as it is in American single-shot pistols, it is difficult to introduce the finger into the trigger guard whilst holding the pistol with one hand, and one gets into the dangerous habit of keeping the finger inside the trigger guard.

I will not describe these various single-shot pistols, as (in my own case) I find shooting them does not do me any good, but teaches a cramped style.

The pistol which is no longer made, but can perhaps be picked up, is a regulation French duelling pistol, full size, which shoots, instead of the .44 duelling charge, a bulleted cap of .2 calibre, with fulminate only, and a round bullet, and is exploded by a cross bar on the hammer which has a flat striking surface. This flat bar strikes across the whole face of the cap, indents itself into the cap,

and having an undercut surface extracts the empty cap after it is fired, as the pistol is cocked.

The pistol has no recoil and hardly more noise than an air gun.

The manufacture would be resumed if there were enough demand for such pistols, and in my opinion they ought to be made as they are infinitely preferable to modern .22 calibre pistols.

COLT AUTOMATIC PISTOL,
POCKET MODEL, CALIBRE .32

CHAPTER XI

LEARNING TO SHOOT

HAVING a pistol and ammunition, the next thing is to find a place to shoot in with safety and comfort.

The usual procedure is as follows:

A says "I want to learn pistol shooting."

"I know a place," says B.

They go off and find a shooting gallery.

When they get there they go down a dark staircase, into a long, dark cellar with a glimmer of light at the firing point and a glimmer of light at the far end, illuminating a series of minute white cards with a microscopic black dot on each. Men lie down on mats, to which they have to grope their way, shooting miniature rifles at these minute spots.

Why, when a man wants to learn to shoot, has he to go into a coal cellar and ruin his eyesight seeing, as one shooter complained, "three front sights and two back ones"?

To shoot one needs all the daylight possible.

One sees fine big public buildings, and is told "They have a Shooting Range for their employees, is it not nice of them?"

You go to it. There is a big bar, with plenty of daylight, rooms with plenty of daylight for games, meals, etc., and then the inevitable dark staircase into a black cellar called the shooting-gallery.

If you cannot shoot in daylight do not shoot at all; you will only ruin your eyesight and never learn to shoot properly.

PLATE 4. COLT AUTOMATIC PISTOL .22 TARGET MODEL

Capacity of magazine: 10 shots. Length of Barrel: 6½ inches. Length over all: 10½ inches. Weight: 28 ounces. Finish: full blued; checked English walnut stocks. Sights: bead front sight, adjustable for elevation; rear sight with adjusting screw, adjustable for windage. Distance between sights: 9 inches. Cartridge: .22 long rifle, rim fire (*greased cartridges only*). We strongly recommend the use of either Lesmok or Semi-Smokeless.

All these artificial-light rifle galleries, to teach the public to shoot, are worse than useless. The Gastinne-Renette Gallery in Paris is an ideal gallery (see Plates 15 and 16).

Learning to shoot is surely more worth while

than playing bridge or golf, and who would play bridge or golf in the dark?

Choose, if possible, a range out of doors, or at least in a well-lighted room (lighted by daylight, *not* artificial light), but if there has to be artificial light, let it be at least as light as in a ball-room.

Next, there must be a safe butt behind the target; a butt which will not only stop bullets which hit or go near the target, but which will stop a bullet which goes wide of the target.

It should be so arranged that if the pistol goes off by accident the bullet can do no harm.

If there is a narrow stall, opening towards the target and high enough at the sides and narrow enough to prevent the shooter turning with his arm extended, it would be a great safeguard, as it will make it difficult for him to turn round and speak to others with his pistol pointing at them.

A thick ceiling will prevent his doing damage if his pistol goes off accidentally into the air, and soft deal flooring will stop bullets shot too low. A hard floor may cause dangerous ricochets.

The beginner is very apt to look only at his front sight and instead of getting it down into the V or U of the back sight, fire with his front sight alone on the target, so great care must be taken to protect against high shots off the target.

Out of doors, a butt six feet high is very little protection as the beginner is almost certain to let off shots over the top.

With the bulleted caps there is, of course, not

much danger if a shot goes over the top of a butt, especially if there is a wood, or shed without windows, beyond, to catch the bullet.

Another point is to have a table or shelf in front of the shooter, so that he can lay his pistol and cartridges on it, and if it is of thick wood, it prevents his shooting into his own feet.

When instructing, it is best to stand at the beginner's left side and be ready to clutch his pistol if he turns it dangerously.

The target should be a white bull's-eye of about five inches diameter on a black ground, and at six to ten yards' distance.

The target should be of cardboard, so that the bullets will go through and into the butt—a hard target may make the bullets rebound.

The duelling pistol has a silver bead front sight, and a big U back sight.

The black front sight on most pistols is quite wrong. It prevents quick shooting, and I am in this book teaching quick, practical shooting only. Practice at hitting minute stationary objects with a long aim died out the same as the revolver did.

Formerly, much of the revolver shooting was done at stationary black bull's-eyes on white targets, just like rifle shooting was done. I always protested against this, claiming that the revolver was meant for quick shooting at moving or suddenly appearing objects, and that extreme accuracy at stationary targets was not its metier.

The war has proved I was right, and now these

deliberate shooting exhibitions are used only to show what accuracy a pistol is capable of, like shooting rifles off a gunmaker's rest. A pistol shot out of a vise can show its capabilities better than any man can hold it.

It was this shooting at black bull's-eyes on a white target which caused the front sight to be made black so as to show on the white target, when sighted at "6 o'clock" under the black bull's-eye. This is all wrong. When the black front sight is placed on a dark object, as a man's coat, it cannot be seen.

The white or silver bead sight on the duelling pistol is instantly seen and is the only practical sight for a pistol.

All this goes to show how worse than useless the old method of revolver shooting was, and I do not intend to revert to it in these instructions on shooting its successor, the automatic pistol.

Load the pistol, put it at full-cock, and take it in your right hand pointing in the direction of the target.

Put it into the beginner's hand with both yours, the pistol pointed horizontally at the target. Make him grip it with three fingers, his thumb horizontal and slightly crooked downwards along the stock, his forefinger fully stretched along the outside of the trigger guard, and clear of the trigger.

Tell him he must not put his finger inside the trigger guard till he has the pistol pointed enough

towards the target to prevent the bullet going in a dangerous direction in case he fires it accidentally.

Then show him how to see his front sight, in the middle of the U of the back sight, and to press the trigger.

This preliminary stage ought for safety to be learned with an empty pistol.

A person who is used to firearms (not necessarily one who is a pistol shot) should stand beside the pupil till the pupil learns the rudiment of safety against accidental discharge, and in aiming.

If there is no such person available then the pupil should be quite alone, two people ignorant of firearms trying to learn at the same time are very apt to shoot each other.

After the beginner can safely load, aim, and press the trigger, then he can begin to learn to shoot.

Load the pistol, stand with the arm fully extended, the pistol resting against the further edge of the table or ledge.

Fix the eyes on the bull's-eye, slowly raise the pistol, the arm fully extended (keeping the head quite upright). Raise the pistol till the right eye looks through the U of the back sight and sees the front sight in the U at the middle of the bull's-eye and press the trigger.

Do not stand sideways, stand almost facing, only slightly forward with the right shoulder, the feet slightly apart, knees straight, arms straight. Nothing is worse than to shoot with a crooked or flabby right arm. You will never learn to shoot

in this way, and a heavy automatic will hit you on the nose with the recoil.

Stand rigid and upright, the swing of the arm upwards should continue and the shot go off as you come horizontally to the target.

The idea is to fire the shot, just as you deal cards, raise and let off when you are horizontal. Do not poke with your head to see the sights, or find the sights and then hunt for the bull's eye with the muzzle of your pistol (like the rifle target shots do).

Never let your pistol move an inch further than necessary. To lift it above your head and to lower it is not only dangerous but useless. You ought to raise to the target; not raise above it merely to come down to it again.

That sort of "flourish" shooting (which is the hardest thing to stop in a learner) is as if, when you want to go next door to your neighbour you went all the way down the street and then turned back to reach him. Open your door, step to his doorway and go in. The man who swings his pistol ("brandishes it" as reporters say) is at the mercy of the man who draws and fires in one movement.

You ought, with practice, to be able after a few shots to shut your eyes and as the pistol gets level, fire, knowing that your aim is right.

A fencer raises his foil with a straight arm and lunges. He does not need to aim along the foil. His sense of direction suffices. In the same way if your grip is right you ought to see your sights in

line on the bull's-eye without any necessity of correcting your aim as your pistol comes up, and the whole thing should be done in one movement —raising arm, sighting, and pressing the trigger.

The action becomes as mechanical as putting your spoon in your mouth when taking soup.

This is the whole art of pistol shooting. Keep on, practise, practise and again practise, until it becomes mechanical. Once acquired you will never lose it.

Only fire a few shots at a time, but several times a day. Do not worry about cleaning more than once a day if you have not the time. It is worth while spoiling the pistol if you can just get the knack of chucking your shots into the bull, instantly, with the minimum of time or movement of the pistol, like throwing stones into a bowl.

A good fencer is known by the small circle his point makes when fencing. In the same way a good pistol shot is known by the small circle his muzzle makes when raising it and firing.

I have seen men shoot revolvers at stationary targets, raise their pistol till it pointed vertically at the sky, aiming all the time, and then slowly bring the muzzle down till it was horizontal, and then begin to fish for the bull's-eye, straining their eyes for nothing and not learning anything of the very essence of pistol shooting which is "lightning speed with accuracy."

Others "brandish" or "flourish" their pistols and then let off into their friend's feet.

I always leave the ground when I see men doing this. There is style in every pursuit, and style in pistol shooting consists in economy of movement and time and especially in timing one's swing, aim, and trigger-pull so that they go together and *throw* the bullet on to the mark.

At twenty-five metres (a shade over twenty-seven yards) shooting at top speed of 1½ seconds a shot I won the Duelling Pistol Championship at Gastinne-Renette's in the year 1910 with two scores, one a full score for the twelve shots and the other one point short of a full score, at an invisible bull's-eye of six by four inches (see Plate 3).

I tell this merely to show what practice will do at this, the Alpha and Omega of pistol shooting.

Just keep constantly practising at this, and all other pistol shooting, with whatever pistol or charge, is merely a variation of it.

I know an extremely feeble old man who for many years each morning has half a dozen shots with a duelling pistol rapid-firing, and although he comes and goes a tottering, feeble old man, he brings up his pistol and hits the bull's-eye instantly, like a young man, when shooting.

CHAPTER XII

SIGHTS

I PUT this chapter after the preliminary one on learning to shoot as, although sights are vital for good, quick, accurate shooting, the beginner is too occupied with other matters to pay much attention to what the sights are like.

Now that the learner can load, fire, put his pistol to half-cock, etc., with safety to himself and others, he can begin to learn a little about sights.

The sights are to enable him to align the barrel of his pistol accurately.

By constant practice a man can learn to point with enough accuracy to hit an object of fair size at close quarters without sights, by sense of direction.

When it gets up to ranges of twenty-five or more yards, or to hitting a smaller object at closer range, his sense of direction must be aided by aim.

Almost all makers of pistols make the sights of their pistols wrong; the only proper sights are those on French duelling pistols (see Plates 2 and 10).

The reason is obvious; for duelling a man has to snap shoot. All other pistol shooting, with very

few exceptions, is very artificial and has been done in deliberate shooting at small black bull's-eyes just as rifle shooting was spoilt.

I used to struggle with these minute sights at moving objects and rapid fire, and I am sure my record scores would have been much better if I had in those days known of the French duelling pistol sights and if, which is very doubtful, these sights had been passed as "military sights" which was an arbitrary term in England, changing from year to year.

The ordinary pistol sights, as placed even now on the latest patterns of automatics, are the worst that one can imagine.

What one wants is a front sight which shows up instantly against any object; large so that it is the most prominent object in aiming, and a back sight with so big a U in it that you instantly get the front sight centrally in it.

These conditions are fulfilled only by the French duelling sights. The front sight is a silver ball without stalk, as large as and similar to the one on a shotgun.

Shotgun men found this the best sight and shotgun shooting is snap shooting like pistol shooting is or ought to be. Now compare this with the sights on other pistols, especially military ones. They have a high knife blade, black front sight. The target pistols have a microscopic black bead on a very thin stalk which gets bent out of position at the least rough usage.

For a hind sight there is a minute indentation in the bar of the hind sight.

When added to this you are expected to see this microscopic dot, or a problematic part of the knife edge front sight (this latter worn to an indistinct grey by friction) into a slight notch which you would need a magnifying glass to find, and which is much too small to hold the front sight in, and to do all this in a black cellar so dark that you have to light a match to look for a cartridge if you drop it you can easily see that men give up pistol shooting in disgust and want some sport where there is light and air, and in which they do not have to tire their eyes out to look for the front sight and a target at the end of a coal cellar.

Whatever pistol you use, have it fitted with a big silver front bead sight placed close to the barrel, no matter how large it is, if your eyesight needs it large to see instantly in a bad light.

Have the back sight with a big U in it so that you see daylight all round it when aiming with fully stretched arm.

This front sight cannot be altered but the back sight can be made higher or lower to suit your style of aiming. At first you do not know if your bad shots are due to the sights not being suitable for you, or not being properly adjusted, or to your wobbly aim. There is no use going further into the matter now, but later I will show you how you can alter the sights to your own individual peculiarities.

What I want to impress is, that from the very beginning, you should not worry yourself with the sights you find on pistols; get your gunmaker to put on duelling pistol sights before you begin to learn. Tell him you want them for taking a full sight in daylight at twenty yards. Let him read this chapter and he will understand what you require.

Always press straight back on your trigger, do not push it off to the left, or jerk at it.

In rifle shooting the left hand steadies the rifle and prevents this tendency to push off to one side and also in a measure counteracts the effects of snatching or jerking at the trigger.

The pistol has no left hand to steady it. The right hand has not only to aim the pistol, but also to counteract the effect of any jerk, snatch, or push to one side from defective trigger pressing.

It is as well to put in an empty cartridge case and to practise pressing the trigger and trying to have the pistol still aligned on the object the moment the hammer has fallen. Aim and press that trigger at your own eye reflected in a glass and you can see if you pull off your aim.

By doing this you can detect any jerk to the right or left, or up or down.

With an automatic there is a tendency to jerk down so that it is very important not to get into this habit in the preliminary practice with a single-shot pistol.

When you get to grouping your shots well

together, you can have your back sight altered so as to put this group into the centre of the object you want to hit, if it does not already go there.

The great thing is to make as close a group of shots as you can; if you group a dozen shots all in a bunch it is good shooting. It does not matter if they are not on the object you want to hit. That is merely a matter of having the back sight raised or lowered to cause the group to go higher or lower accordingly.

Raising the back sight makes the group higher; lowering the back sight makes the group lower.

Putting the back sight over to the right makes the group go to the right; putting the back sight over to the left makes the group go to the left.

You should be cautious however about this lateral adjustment. It is better to correct your tendency to jerk to either side than to make the pistol conform to your bad trigger pressing.

When giving instructions on learning to shoot in an early chapter, I took it for granted that the learner is using a pistol he is reliably informed shoots where the sights are pointed.

A beginner cannot know himself whether the fault is his or the pistol's when he makes a bad shot, so he gets into a hopeless tangle when using a pistol wrongly sighted.

An expert after a shot or two to find how the pistol is sighted can make allowance for the error in the sights. I saw a man make a marvellous score with a double barrelled rifle. I said to him

how well the barrels shot together and he answered, "I had to aim two inches higher and to the left with the left barrel than with the right barrel." It was the man who was marvellous not the rifle.

When a man begins to become expert he knows when his "let off" has been correct and that, if the bullet goes wide in such a case, it is not his fault, but the fault of the pistol.

The modern single-shot pistol and automatic pistol are almost invariably very accurate, so if the bullet goes wrong when the pistol is "let off" correctly, it is the fault of the sights.

Shots wide to the right or left mean in each case that the sights are not adjusted centrally to the barrel.

The front sight, being a fixture, is very unlikely to be at fault, but the back sight may have got moved to one side.

The back sight has generally a scratch made from its base onto the barrel, and if this scratch does not coincide then the sight has shifted and it must be knocked into place.

When the back sight is central and the bullets do not group to either side of the mark, but where you aim, then fix the back sight permanently and immovable.

A *movable* back sight is a constant annoyance and I never understand why makers put it so. You shoot badly and after wasting a lot of shots, find your back sight has shifted unobserved to one

side. I lost a stag recently owing to the back sight of my rifle getting knocked off, being wedged only in a slot instead of being screwed in.

Have this back sight absolutely central. If you shoot to one side correct your way of letting off. Do not shift the back sight to avoid the trouble of learning to let off properly.

If you do, you will be like a man driving who, instead of straightening his horse's mouth, puts one rein at the cheek and the other at the bottom bar and makes the horse go worse and more lop-sided every day till the horse is incurably crooked.

If you keep on shifting the back sight to counteract your bad let off, you will end by not being able to let off properly.

If you shoot too high all you have to do is to file down the U in the hind sight, a little at a time, until it is right. If you shoot too low, you will have to get a higher back sight put in and file that down gradually till you get it right.

The place to aim at is exactly where you want the ball to hit, seeing the whole of the ball of the front sight in the U of the back sight. Keep on working at the back sight till you arrive at this result.

If in target shooting you aim at the bottom edge of the bull's-eye, you will require a different adjustment of sights for each size of bull's-eye.

A two-inch bull's-eye at twenty yards requires the pistol to shoot one inch higher than the aim so as to put the bullet in the centre of the two-

inch disc when aimed at its bottom edge, and if the bull's-eye is four inches the pistol would have to be sighted to shoot two inches higher at the same distance to hit the centre.

As natural objects are not at all of the same size, and you cannot carry twenty pistols shooting to various heights to choose from, it is best to have the pistol sighted to hit the *exact spot* you aim at, and then it does not matter if you are shooting at an elephant or a mouse, you can hit the spot.

The tendency to "duck" and flinch at the noise and recoil makes beginners put their shots very low.

The revolver used to make men shoot high, the automatic shoots low as a rule from muzzle heaviness, the wrong angle the stock is placed at, and the uneven blow back (which latter I will explain later).

Single-shot pistols are generally of American make and it is very curious what defects they have in comparison with the French duelling pistol.

To begin with they have a stock too much at right angles to the barrel and much too small and narrow.

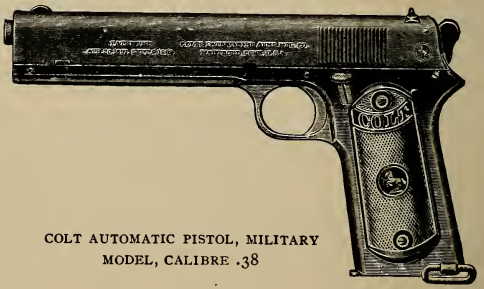
Next, the trigger is in the wrong place. The proper place for the trigger is so that you can just reach it with the first joint of the outstretched first finger. Pressing the trigger with the second finger is a ridiculous habit and, with an automatic pistol, results in making the pistol jamb burn the first finger with the ejecting cartridges.

The American single-shot pistols have the trigger so close to the hand that the trigger finger has to curl around the trigger beyond the second joint.

I never could understand how Chevalier Ira Paine, with his big hand, managed to shoot American single-shot pistols.

The trigger being too close not only makes pressing it difficult but makes it so that, instead of straight back, it has to be pressed to the left and sends the bullet to the left.

COLT AUTOMATIC PISTOL, MILITARY MODEL, CALIBRE .45



COLT AUTOMATIC PISTOL, MILITARY MODEL, CALIBRE .38

CHAPTER XIII

TARGETS

I BEGAN my instruction with a white bull's-eye on a black target, but, as soon as the pupil becomes a little proficient, this bull's-eye shooting should be stopped.

The pupil should then learn to hit the middle of a large object, not a small object of different colour, superimposed on a larger one.

The great difficulty beginners have in deer-stalking is that they aim at the stag as a whole, instead of trying to hit a definite part of him.

If you aim at even a large object in the former way, you are very apt to miss it entirely.

In France there are man targets of iron, the natural size of a man in profile, which can be stood on the ground in front of the butts. These are the best I know for shooting at with the small duelling charge.

There are divisions incised into this target so that the marker, when he goes up, can see the value of the shot, but these divisions are invisible from where the shooter stands. He must judge as to where to aim and hit.

The target is painted over after each series of shots with a mixture of soot and water.

Be sure not to use any size or varnish, as this fixes the black so that the bullet does not knock it off, and so shots are difficult to locate on the figure from the firing point.

With soot and water the shots appear almost white on the target at the spot the soft lead bullet has flattened and dropped down, taking the soot with it.

These iron targets are suitable only for soft lead bullets driven at low velocity.

With a high-power automatic pistol it would be dangerous, as bullets would rebound or glance off long distances if the edge of the target were grazed.

For shooting with powerful ammunition, the target must be of wood, or canvas on a wooden stretcher, with black paper pasted over it. The bullets go through into the butt, which latter must be exceptionally thick or else the last of several bullets striking in one place will go through it.

The pattern of target we used at the Olympic Games at Stockholm in 1912, I do not like. It was much too big and the rings (upright ovals) too distinct. It was like shooting at an ordinary ring target with visible bull's-eye.

It was a good idea, however, having upright ovals instead of circles for a man target, as a miss right or left is important, whereas a rather high or low shot would still strike a man.

For animal targets, on the Continent, these ovals are placed horizontally, because an animal is longer than it is high; also for running shots a miss in front or behind the bull's-eye is more excusable than one over or under.

The proper distance to practise at is the distance you can hit the invisible bull's-eye twice in three shots. As soon as you can do better than this, move the target a few feet further off, or decrease the size of the bull's-eye.

The idea is to have a target on which when shooting your very best, you may just be able to make the highest possible score.

This is the principle on which the targets are made in all the Gastinne-Renette competitions in Paris.

The highest possible score is not beyond the power of the pistols, if held by a very good shot.

For the Grande Medal d'Or, the holding has to be nearly as good as if the pistol were fixed in a vise, but it *is* possible to make, as several dozen winning targets made by the crack shots of the world testify.

A target impossible to make a full score on discourages the shooter.

It rather adds to the interest if a hit breaks something; if a clay pigeon, for instance, is put on a nail for a bull's-eye on a man target painted the same colour, it is practically an invisible bull and it is a great satisfaction to see the pieces instantly fly at a hit, instead of having to examine the target to see where your shots are.

These clay pigeons, or soup plates, or whatever you use, would not do if put against an iron target, as the splash of the bullet would break them even if they were not actually hit.

One can buy an apparatus in Paris which fills rubber balls with water, which make good targets to shoot at either hung up or thrown in the air.

To hit them with a pistol with a bullet when thrown in the air is extremely difficult, and can only be safely tried when shooting out to sea, or against a high cliff.

Single barrel pistols of 28 shotgun bore, 10-inch barrels are made to shoot shot, and these are very good for such shooting and train timing and swing in snap shooting.

At eighty live pigeons at twelve yards' rise I have got more than half I shot at. One has to be quick, as the pigeon is so soon out of range. No. 7 shot is best for this, but the pistol only shoots half an ounce of shot, and makes a very small pattern.

I will explain in the next chapter how to shoot so as to compel quick shooting without the cumbersome machinery for making a target appear and disappear.

If you count seconds for yourself or have them counted for you, the time varies and one cannot help dwelling on the counting when a fraction more time is needed for your aim to be correct.

The utmost care must be taken, if you have an assistant to go to and from the target, not to point in his direction or to load before he has come

back. Even at otherwise well-managed shooting clubs, there is too much carelessness in this respect.

Targets which draw up and down on trolleys are a great nuisance, and yet almost all shooting galleries are equipped with them, and their presence is considered the acme of good gallery equipment in England.

This may be all right for preventing markers being shot, but I prefer an iron man target, life size, standing on his feet in a green field with a suitable background. One can shoot so much better than at a figure painted on a flat background.

You see a miss by the momentary puff of dust where the bullet hits the ground, instead of having to look for a bullet hole in the painted background.

It would be possible to make a target which drops down and rises again from the impact of the bullet.

I have a target in the form of a stag which when you hit his invisible heart, he half rears, then bends his hocks and plunges down on his knees, throwing back his head in the most realistic manner. This stag, stood amongst long bracken and stalked, gives a most lifelike performance.

He is wound up in various places and the shock of the bullet on a buffer releases the movements in succession with momentary intervals.

It was made by a very ingenious target mechanic, who also makes monkeys which run up a tree when hit, parrots who turn a somersault on

the branch they are sitting on when hit, a man who takes off his hat and bows to you when you hit him properly, a chamois who tumbles over a precipice.

The maker, who has a shooting gallery on the Continent, makes a good profit out of it, as the bull's-eyes are very small and difficult to hit, and people keep on paying to shoot in order to amuse their companions, and children beg their parents to try to set the automatons in motion.

CHAPTER XIV

PRACTICAL TARGETS

THE pistol being, primarily, a man-shooting weapon, the target for practice should be the shape of a full-sized man.

The man target we used at the Olympic Games at Stockholm in 1912, was a coloured paper target of a soldier standing at attention, full face. This was pasted on a wooden board cut to the same shape.

The bull's-eye was an upright oval on the breast, surrounded by concentric upright ovals.

The divisions could be seen from the firing point. Competition at it was permitted with .22 pistols, which was ridiculous as they are not duelling pistols, or suitable for war or self-defence.

The regulation French Duelling Target is made in several ways, but in all cases it is the figure of a man painted black, standing in absolute profile (see Plate 3).

This can be had, either printed on paper, to paste on a board cut out to its shape, in cast iron with a base so that it stands up of itself, or of steel with an electrical device for registering the

shots. The figure is in profile, which is not correct.

A proficient duellist stands as full face as a man shooting a gun. This position is easier to shoot in, but it is also easier to hit.

In the absolute profile target, the places where misses are usually made are past the small of the waist and under the chin. These would not occur on a man standing full face, or nearly so.

The target of paper pasted on wood has the bullet holes covered by white and black paper pasters.

The bullet hole is first pasted over with a white paster, so as to show its place from the firing point. After the next shot a white paster is put on this fresh shot and the former shot obliterated by a black paster.

On this target there is no bull's-eye and all hits, anywhere, have an equal value.

In competitions, a row of these figures stand in the field and the marker, after a shot at each has been fired, goes down the line and pastes white pasters over the bullet holes and black patches over where he finds a white patch. He need not say anything, when he has finished, it is at once seen from the firing point which targets have been hit and where, and what targets have been missed.

The iron target is divided by incised lines into an oblong bull's-eye with various subdivisions as shown in the diagram (see Plate 3).

The bull's-eye counts four, the space on each

side three, the space below two, and the head and the bottom of the frock coat one each. These divisions are invisible from the firing point.

When these are painted with soot and water, or distemper black and water, the bullet knocks off the black and leaves a distinct lead-coloured mark.

When shot at in the open this is all that is necessary, but if, instead of a bank behind the figure there is a wall, this wall is painted white and a second lot of paint (this time whitewash) is kept for whitening the wall, if a shot hits that, to obliterate it so as to show where misses go.

An inexperienced marker is apt to put his brush into the wrong pot, so that the result is a grey colour.

The electric marking target looks exactly like this last and is painted after shots in the same way, but the various divisions are separate plates which stand on rods with springs behind.

When a shot strikes any plate it drives it back, and the spring returns it to place.

The act of driving back makes electric connection, transmitted by wires, to a small copy of the target, like the indicator inside a hotel lift, and rings a bell. It shows the value of the shot and approximately the place it has struck. The actual spot struck is not indicated.

CHAPTER XV

HOW TO HOLD THE PISTOL

As the revolver had a short stock with an acute curve and was muzzle heavy, the grip I recommend for it is not suitable for the duelling pistol or automatic.

I take the duelling pistol first as that has the ideal handle or stock; the automatic, except in the American Colt Regulation .45, being open to great improvement.

The duelling pistol is a survival of the old horse pistol in balance and form of stock, and this has never been improved on.

Most things undergo constant improvement, but the pistol stock, on the contrary, has steadily deteriorated.

The old horse pistol balanced just right, and the long light barrel was counterpoised by the heavy stock.

The angle was right, and the sights fitted close down to the barrel. In some cases there was no back sight but aim was taken as with a shotgun.

The perfect balance almost did away with the need of a back sight.

Then the revolver came with its front overbalance, which often needed, on its short upright stock, a grip with the little finger under the butt to steady it.

As I explained in my *Art of Revolver Shooting*, it was necessary to get the line of the arm as nearly possible in line with the barrel, consequently the thumb also had to be extended in line with the barrel.

This was possible with the old "break down" action revolvers, but when solid-frame revolvers were made to withstand the stronger pressure of the nitro powders, the extractor opening lever had to be put in the way of this thumb extension, so that the thumb was crooked to avoid the nail being split by the recoil, or the catch opened by the thumb striking it from the recoil.

The proper way to hold the duelling pistol is not very high up the grip, because if the hold is taken so high up as to make the barrel in line with the arm, the back sight is hidden by the hand.

This lower hold is not a disadvantage, as the obtuse slope of the handle and the perfect balance of the pistol have no tendency to drop the muzzle.

The thumb is curved downwards just enough to get the best grip.

The duelling pistol has a spur at the near end of the trigger guard, which some shooters put their second finger round (see Plate 6). I find that this only gives one a clumsy handful and that it is better to have the second finger with the others

together round the stock, and close under the back of the trigger guard.

I am sorry to find that some still cling to the absurd practice of using the second finger to press

PLATE 5. HOW TO HOLD THE DUELLING PISTOL (I)

the trigger, holding the first finger along the pistol.

There is nothing to recommend this and everything to condemn it, and I have never seen it used by a good shot.

It is only a fashion, like the new one of jerking the elbow out at right angles to look at the wrist

watch, or turning up the collar, and the bottom of the trousers, on a hot dry day.

Using the second finger for the trigger deprives the hand of a third of its grip on the stock. It

PLATE 6. HOW TO HOLD THE DUELLING PISTOL WITH SPUR (2)

employs a less sensitive finger for the trigger, as the first finger is always used for sensitive work, the second being only a gripper. Moreover, the first finger, if extended along the barrel when shooting an automatic, not only gets burnt and cut, as it lies along where the spent cartridge cases and

powder gases escape, but it is apt to get jammed into this opening and stop the action of the pistol.

I shot an automatic pistol alternately with another man, which jammed when my companion shot it but not with me. I found he kept getting his first finger into the mechanism, as he was using his second for the trigger.

Now as to holding the stock of an automatic pistol. The United States Regulation Colt .45 Automatic has the best grip of any, and one can hold it, as I have advised for the duelling pistol, right up hard against the projection over which the recoil slide operates.

The smaller Civilian and Police Colt have not quite as good a stock, rather more upright; the same applies to the Savage and the Smith & Wesson.

The German Military Regulation Automatic has a nice stock but it is rather too thick. It is well balanced and at the proper angle.

The "Hammer Head" stock attachment to the barrel of some automatic pistols I find most awkward to hold, and impossible to get a sense of direction with. One finds oneself far below the object one wants to hit and the muzzle has to be canted up with a most wrist-spraining movement. The recoil comes on the wrist at the same angle as if you put the first joints of your fingers on a table, and the palm of your hand against a leg of the table whilst keeping the arm horizontal.

I can neither hold nor shoot in this position;

it is all so awkward. If a man lowers his head, he can look along the sights, but if he keeps his head up as he should and does in shooting any other pistol, it is very difficult to align the sights except by bending the arm and raising the elbow. In any case I cannot shoot with such a stock, so can give no instruction in its use.

In a later chapter I will give my ideas of what should be altered in automatic pistols from a shooter's point of view; the "Hammer Head" or "right-angle" stocks being one of these.

Not knowing how to hold and shoot a pistol, has given rise to all those inventions of a portable rifle stock to fit on a pistol, so that the pistol can be shot like a rifle.

To begin with, such a stock puts the sights too close to the eyes, the noise is deafening and the accuracy very bad, compared with holding the same pistol at arm's length as it should be held. It is merely the attempt to try and hold it steady by men who cannot shoot a pistol.

A moment's thought will show that, unless a man is as near-sighted as an owl in daylight, he cannot shoot with the back sight resting on his nose.

A pistol fitted with a rifle stock must be used with great caution. You are apt to put the fingers of your left hand over the muzzle, as the end of the muzzle comes just where one puts one's hand with the fingers round the fore end, to steady a rifle or shotgun.

CHAPTER XVI

RUNNING SHOTS

THE pistol being meant for use at close range at objects one sees only for a moment, or which are in rapid motion, I do not advise getting too much into the habit of taking long, deliberate aim at stationary targets.

When you can handle the pistol with safety to others and yourself, it is better to begin to learn shooting rapidly and at moving objects.

I think it is well to begin to shoot at moving objects at first, instead of rapid shooting. You can begin at slowly moving objects, which does not hurry and flustrate you as shooting against time may do.

Above all do not attempt to shoot as many people tell you to.

The greatest bar to shooting at moving objects with the rifle or pistol is the way most men shoot at them.

What they do is to aim at a spot and shoot when the object arrives there. Shotgun men do not make this mistake, but men used only to lying on their faces like a squashed frog in rifle shooting invariably do.

Wherever you go to a rifle meeting where there is a competition at a moving target, "running Deer," "Running Man" or "Gliding Man," etc., it is always the same.

A few men shoot as they ought to, and win all the prizes. The bulk of the competitors lie on their faces, as they were taught to do at stationary targets, take a deliberate aim at a spot on the background, and wait till the target gets opposite their aim.

Then—boom—the dust flies up where the target *was* a moment before, but it is now—elsewhere.

It is as if you tried to catch a fly by putting a finger on him when he is on the table-cloth. You will put it where he *was*, not where he *is*.

The correct principle (the one with which I won the Rifle Running-Deer World's Championship at the Olympic Games in 1908) is to treat the rifle or pistol exactly as if it were a shotgun.

Assuming you are not familiar with shotgun shooting, get a man who is a good shot with the shotgun to coach you, when practising with the pistol at moving objects.

If you are a shotgun man you do not need to be told what follows.

At a stationary target, however rapidly you are shooting, you try to hit *that object*.

In shooting at moving targets you try to make two moving objects (the target and the bullet) meet.

The target is moving. The bullet also takes

time to get where the target will be. You have to get the bullet to arrive simultaneously with the target at the same spot.

If you aim at the object, the bullet will arrive at the spot after the object has gone further on.

To give an illustration:

An illustrated paper showed an engraving of a man on a motor bicycle going at fifty miles an hour, at six hundred yards' distance.

There was a cross made on the man's chest which, it was explained, was the spot to aim at in order to hit him.

If the rifle were correctly aimed for this cross, a man could shoot millions of shots and never hit the motor-cyclist.

The bullets would reach the spot where the motorist was a moment before, but he would be yards further on when the bullet arrived.

Now the way to overcome this missing behind is to "swing" and "time." These are shotgun men's terms, never used or understood by pistol or rifle shots, and this is the reason so few riflemen can hit moving targets, and chase them with the bayonets instead.

Suppose you have a shotgun in your hands and a pheasant comes flying across you. The thing is to hit him in the neck with the centre of the charge so as to make a clean kill without a flutter in mid-air—"neck him," as we call it.

Most men try to shoot without moving their position and so hamper and cramp themselves

unnecessarily by having to twist the body if the bird is passing them at an awkward angle.

Turn like a soldier does in "right about face" to either side, so that the bird gives you the easiest crossing shot. Whilst doing so, follow an imaginary point in front of his head with your eyes, the distance in front varying with the bird's speed and distance from you. Whilst doing so bring up your gun (*not* looking at the gun), the gun swinging as your body swings in the direction the bird is travelling. As the gun comes to your shoulder press the trigger.

If you look at the bird, you will shoot *at* the bird, and consequently shoot behind where he was at the moment the trigger was pulled. If the bird was forty yards off you will have missed clean behind him.

If nearer, owing to the shot spreading over a thirty-inch circle, you may have hit him far back in the body, what is called "tailored him," and he will go off and die a lingering death.

If you shoot forward enough, you will either kill him clean or miss him clean (a miss in front).

That is the great thing. If it *must* be a miss let it be a clean miss, *in front.* Not shooting far enough forward is the chief cruelty in shooting—wounded animals going off to die in agony.

Always remember this when shooting at animals and birds. The forward end is the vital end; hitting it causes sudden, painless death, so *swing far enough forward.*

To hit bird after bird, animal after animal, too far back, as one sees some men do, to an accompaniment of screams of hares and rabbits, and fluttering birds, is disgusting.

If you shoot well forward, none of this happens. You may not have so much game down, but each one of them drops stone dead without a sound. There is no calling out, "Bring a dog, I have a 'runner.'"

I think it would be as well, before trying moving shots with a pistol, to do a little shotgun shooting at clay pigeons, so as to get into the idea of swing and timing, if you are not a shotgun shot already.

When you can swing your gun to an imaginary spot, in front of a moving object and press the trigger at the moment the sights are aligned, without stopping your swing, you can shoot the pistol with success at moving objects, provided you treat it exactly as if you were using a shotgun.

Have a moderately large object which the bullet will either break or leave a visible hole through, arranged to pass you at a slow speed.

It can either be dragged by a long string, run on a trolley (the trolley shielded behind a bank so that a bullet could not strike it) or some other slowly moving target.

A swinging object is of no use. It makes a difficult curve to follow, for the beginner, and its passage lasts too short a time.

A swinging object also makes the shooter try the objectionable method of waiting and aiming

at the spot the object swings to, which I want to avoid.

If your target travels slowly enough, and is large enough, and at only some twelve yards' distance, there will be no necessity to aim in front of it. Its forward edge is far enough.

Fix your eyes on the front part of the target. As it traverses bring your pistol up without looking at the pistol, as it comes level with your eye and the sights get aligned. Keep on swinging your body and pistol and press the trigger, while still swinging.

CHAPTER XVII

RUNNING SHOTS (*Continued*)

It is best to stand with the feet slightly apart and facing rather where the object is going to, than from where it comes, as your shot will go off towards the end of its run.

At first bring up the pistol very slowly, and swing with the object for a moment after your sights get on it. Do not first aim at it and then move in front of it.

Gradually come quicker and try to fire the instant your pistol comes up.

Speed in coming up does not help you. Most men come up in such a hurry that they wobble all over the place. Save time by firing the instant your sights are aligned, not in bringing up your arm.

Start slowly, increasing your speed as you raise your arm, not in abrupt jerky movements like the English Military salute.

Do not raise it with a jerk. It spoils your aim. A good engine driver starts the train so that you do not feel the start. That is the idea for raising the pistol. The faster the object is moving the faster, as a rule, the arm has to be raised.

But if the object is coming from a distance, and will be in sight for some distance as it passes, this rule does not apply.

You can take your time raising your arm, only your following swing must be fast and of course your "allowance" in front of the object greater than at slower moving objects.

As you get proficient, increase the distance you stand from your target and increase its speed.

It is a mistake to have a small target for practising. When you miss you cannot see if you have missed behind or in front, and you get to dwelling on your aim.

As to the distance to aim in front, that is a matter of experience and, other things being equal, the man who has this experience can beat another shot who can hold closer on a stationary object, but does not know how far to aim in front of a moving one, or how to swing and time.

The difference between shooting at an upright man moving and an animal is that, in the former case, the most important thing is to judge the proper distance to aim in front; in the latter case, to keep one's elevation so as not to miss over or under.

When shooting at a running man target, the man being narrow, one is very apt to miss just behind the back.

At a running deer one cannot, if at all a decent shot, miss him behind his tail (though one may miss past his chest in trying to shoot forward

enough), but it is easy to miss over his withers, or under his brisket.

Keep on practising at moving objects, varying the distance and speed constantly, and the direction from right to left and left to right, till you can judge how far in front you must shoot for each case.

It is best to always use the same pistol and charge. If you use at one time a .22 pistol and then the .44 duelling pistol, you will get confused, as the .22 goes up much faster and consequently needs less allowance in front of the target.

As long as you keep to the same pistol, you need not mind how slowly the bullet goes up. You know how much to aim in front but, if at one time you must aim an inch in front and next time four inches for the same speed, you can never learn to judge where to aim.

The various rifles I have used at the Running Deer at Bisley since the early days vary in allowance in front from four feet down to merely aiming at the point of the shoulder.

The faster the bullet goes, the easier it is to judge how far you must aim in front at moving objects, but here comes in the inevitable "compromise."

The faster the bullet goes, the more force it needs to propel it, which means more recoil and shock to the shooter.

You have to make a compromise. If you are strong and have good nerves, and don't take

alcohol or smoke, you can stand a strong recoil without its spoiling your shooting. If you are not strong, it is better to have to aim further in front and save your nerves, by using a lighter load.

I am not speaking from theory but from experience. I have specialized and made record scores on the "Running Deer" at the National Rifle Association of England's Meeting since I was a small boy.

When I first began, an older man shot a very light charge and kept winning, although he had to aim an enormous distance in front of the "deer" to make up for the slow speed of his bullet. But, as there was little noise and no recoil to worry his nerves, he put up wonderfully good scores.

I, knowing no better, tried to get my bullet up quickly by shooting a tremendously big charge. The bullet went up quickly but the recoil nearly knocked me down, and in consequence my shooting was very erratic.

I have since experimented from very small charges up to the heaviest, having a velocity of over three thousand feet a second.

The year I won the World's Championship at the Olympic Games, I had arrived at a "compromise" between speed of bullet and recoil, which enabled me to win, but since then I have yet a still better compromise, which enables me to make highest possible scores.

Formerly, in revolvers and pistols, one had

to bear the full recoil. Now, automatic pistols, which utilize part of the recoil to operate opening, loading, ejection, and reclosing, have less recoil when shooting heavier charges than revolvers did.

The automatic pistol has a softer recoil than a pistol or especially a revolver, owing to this absorption of recoil.

It is more of a push, less of a blow.

Therefore, when you have found the heaviest load you can stand in a single-shot pistol, you will find you can use a heavier cartridge in an automatic pistol, without any more discomfort.

You will therefore not have to aim so far in front with an automatic pistol when shooting at moving objects, and not have to take so high an aim at distance objects to allow for the drop of the bullet—as with a revolver.

CHAPTER XVIII

SHOOTING AN AUTOMATIC PISTOL

BEFORE everything else, be sure you have the right cartridges for the pistol you are using. If you have too strong a cartridge you may have a fatal accident. If too weak a cartridge the mechanism will not operate. A weaker cartridge than that for which the pistol is made will prevent its working properly or, in fact, working at all, unless the closing is assisted by the hand, and then it ceases to be an automatic pistol.

It is best to begin practising single loading. The best way to do this is through the magazine so as to get familiar with the magazine. Take out the magazine, put in only one cartridge, put back the magazine, and operate the slide. The pistol is now a single loader, ready to shoot.

Do your shooting a few times like this, till you get used to the pistol.

You will find the recoil different from that of a single-shot pistol or a revolver.

Instead of the recoil coming back directly on you it will be softened and, even with the best of automatics, the pistol will have a tendency to

wriggle and "tap," not recoil back in one clean kick.

When practising, make a point of putting the safety bolt on and off, using this safety bolt as you would in putting a single-shot pistol to half-cock.

There is this difference. Whereas, in English makes of guns and sporting rifles, the safety bolt puts the weapon automatically at safe each time it is reloaded, having to be taken off before each shot can be fired. Military firearms are only at safe when the safety bolt is purposely put on with the thumb.

The usual automatic pistol is made on the military idea. The safety once off, it remains off till the user puts it back at safety, no matter how many shots he has fired in the meantime.

The Colt automatic pistol, like the Smith & Wesson hammerless safety pocket revolver, remedies this defect by having a *second* safety which makes the pistol safe, even if the first safety slide is not at safe. This consists of a lever at the back of the stock which is at safe till the hand presses it in firing and which keeps the weapon safe till the stock is gripped in actual firing.

Any one who is a pistol shot grips the stock instinctively when shooting, but I have known men unused to firearms, unable to shoot a pistol having this safety grip, as they pull the trigger without squeezing the stock.

I was asked to give expert opinion as to whether

a good revolver-shot had shot a man accidentally or on purpose.

The pistol he used was a Smith & Wesson hammerless safety pocket pistol.

The contention was that a man trying to drag the pistol from his hand had caused it to go off accidentally. I said that with an ordinary revolver, if the man had his finger on the trigger at the time, it was very probable the pistol would be discharged accidentally, but that the man would not be likely to do so with a Smith & Wesson safety pocket pistol. To test it we experimented, and besides not being able to make me fire the pistol (empty of course), when we reversed matters, my questioner, although he tried his utmost, could not fire the pistol whilst I pulled at it.

The holder pulls against the *front* of the stock to avoid its being taken from his hand, he does not *squeeze the back of it*. The result is that the pistol cannot be discharged, except by a voluntary effort. He can pull the trigger as much as he likes, but as long as he does not grip, but merely uses the front of the stock as a handle to pull against his adversary, the pistol is safe against accidental discharge.

When you have got accustomed to the automatic pistol as a single loader, fill the magazine and use it as an automatic.

For continual rapid-firing, that is one loaded magazine after another, do not shoot off the last cartridge of a magazine before inserting a fresh one. Otherwise it necessitates dragging back the

slide with both hands after each fresh clip is inserted and wastes time.

Most automatic pistols remain open after the last shot has been fired, a most necessary thing, as otherwise you never know if your pistol has another shot available or is empty.

To do continuous firing shoot all but one cartridge of the clip load, press the stop, and drop the empty clip. The loaded clip, held in the other hand, is inserted into the butt and shooting can at once be resumed. The last cartridge left in the barrel, from the first clip, when fired, brings up the first cartridge of the new clip and so on, indefinitely.

You will find slightly different problems to overcome as compared with the single-shot pistol or revolver.

Rapid-firing is incomparably easier than with a revolver. There is not only gain of time and no fatigue of the trigger finger or thumb from cocking, but also the hold of the stock does not have to be changed. It is merely a matter of aligning and pressing. The recoil is also deadened and much less severe.

You will find a tendency for your shots to be strung out vertically, owing to varying escape of gas at the breech.

You will find lateral variation is much less than with a revolver, the bullet going from the barrel of the automatic, not jumping into it from a cylinder, thus tending to accuracy.

The vertical variation is more than from a revolver, and this vertical deviation is absent from a good single-shot pistol.

When shooting an automatic pistol do not be discouraged if your shots are not so good vertically but strung out. It is not your fault but that of the pistol, and you cannot correct this by your shooting.

Later I will give special practice for automatic pistols, but if you are a good shot with the single-shot pistol or revolver, you will have no difficulty in shooting the automatic pistol well, as soon as you have got used to its characteristics.

I used to think the occasional very low shots were due to dropping the muzzle in pulling, but I find it is not this. It is caused by an occasional escape of gas greater than normal at the breach of the automatic pistol, causing the bullet to have a weaker flight and therefore striking lower.

CHAPTER XIX

TIMING APPARATUS

In order to improve our speed in shooting, it is important to have a mechanical timing apparatus.

Trying to judge speed by counting or getting someone else to count half-seconds is very unreliable. Where everything depends upon making your last shot a good one the counting is bound to become slower, in the anxiety not to spoil a good score.

With a mechanical timer there is no relenting, it is Fate, and if you cannot make a good shot in time, your score is spoiled. This trains you properly; you are not buoyed up by false ideas of your skill which, when there is real timing, will prove that your ideas of your skill are vain delusions.

In England a clock is used, marking seconds or half-seconds.

This is very good for the man who works the targets; he sees if he is working the time right, but it does not assist the shooter as he does not hear the time being struck.

For the learner, it is important that he should be able to apportion his time, take so long for

lifting his arm, so long for aiming, etc., so as to learn how to do the best shooting in the time limit allowed, and judge accordingly.

For this purpose there is nothing better than the metronome.

The metronome is used by music teachers for instructing their pupils in the right time when playing.

Music for instruction is marked with the metronome beat proper to it: all that has to be done is to wind up the metronome, set it to that number, and start it beating.

A metronome consists of a pyramidical box with clockwork, which makes an upright pendulum beat at whatever speed it is set.

The speed depends on a weight which is moved up and down the rod, to set marks, which correspond to numbers engraved on the sides.

It is, in fact, a clock pendulum reversed.

The more elaborate ones have a bell attachment which strikes after any desired number of beats of the pendulum. If you want to practise three minutes' exposure of target, you set the metronome at half-second beats (120 to the minute) and the ball to strike at every sixth beat.

Accuracy of course depends for what purpose you are practising, but to be able to hit an object a foot in diameter, at ten yards' distance instantly, is ample for self-defence.

CHAPTER XX

SNAP SHOOTING

WHEN you have become fairly proficient at hitting moving objects, you will be able, with a little practice, to soon pick up the knack of snap shooting.

By snap shooting I do not mean the sort of competition where you are given three-seconds intervals. That is merely "fast deliberate aim," in fact is as slow as allowable for practical shooting, slower is mere target shooting.

Snap shooting is when the pistol is fired the instant it is levelled without any dwelling on the aim.

Use a big target, at ten or twelve yards.

Keep your head up, eyes fixed on the target.

As you raise your pistol, begin squeezing and let the pistol off as it comes horizontal.

With practice you can put all your shots close together. It is the most mechanical of all pistol shooting.

You get to putting shot after shot in the same place like throwing marbles into a hat.

You can test how mechanical it becomes for yourself.

After putting a dozen shots close together, try to put a dozen shots a foot higher on the target.

You will find yourself all at sea, and will have to begin aiming. Then you get so mechanical you will find it difficult to hit a foot lower, which you found so easy before.

Your arm has got so used to lifting to a certain position, your trigger finger to squeeze when the arm is raised to exactly the same position, that the whole thing becomes as mechanical and subconscious as swinging your arms and legs as you walk.

Your arms swing to exactly the same spot each time. Try to take longer or shorter steps, and to swing your arms further or less far, and you will see how mechanical your ordinary walk is.

If you want to win a prize for snap shooting, you can, by practising constantly under identical conditions of distance, shape, colour, height of target, and lighting, get so mechanical that it takes an effort *not* to hit the same spot continually.

For this reason, to learn snap shooting, not merely forming a habit, it is best to constantly vary the height of the target you shoot at, or try to hit various parts alternately.

Get someone (if you are shooting at a man target) to call out "head" at the first beat of the metronome (beating at 120 to the minute), and try to hit the head before the next beat of the metronome.

Then he will call "feet" and it is ten to one that

you will swing too high; or if it was "feet" first you will not be able to get as high as the "head" next time.

You can put in your shots at great speed if it is always to the same spot, but if you have to vary and do not know where you are to hit, till you get the word to go, it is impossible to shoot quite so fast accurately.

For this reason it is well not to think one has mastered snap shooting when one has got into the knack of putting all one's shots on the same spot.

Snap shooting and shooting at moving objects, are the two sorts of shooting of real use.

Shooting long shots (which I will treat of next) may be useful at times, but deliberate shooting at minute bull's-eyes is only useful for winning prizes and getting a reputation for being a "Crack Revolver-Shot."

My world's record snap-shooting score was published in the newspapers with the words under it—"This is the highest at present, but it will, of course, soon be beaten."

Naturally, it was not as pretty a group as the target published next to it, which had been shot with deliberate aim, but this latter score has been equalled dozens of times. While my rapid-fire score is unbeaten (Appendix 10 and 11). The value of a score can only be judged if the conditions it was shot under are known.

If you want to be thought a good shot by the public, leave rapid, snap, and moving object

shooting alone, otherwise your best scores will look so bad beside those of the man who aims, lowers his pistol, aims again, wipes his hands, and after half an hour of these antics, scores a bull's-eye.

CHAPTER XXI

LONG RANGE SHOOTING

THE moment the bullet leaves the muzzle of the pistol, it begins to fall, owing to the force of gravity.

The faster it is going the further it goes before this drop is sufficient to be noticeable. Gravity acts through time, so if a bullet goes twice as fast as another, it goes twice as far before it has dropped the same distance as the slower bullet.

The big bullet of the duelling pistol has more air resistance than the .22 bullet of the American pistols, also it has comparatively a much smaller charge, so it begins to drop more rapidly and at shorter range.

The duelling pistol is sighted for twenty-five metres as that is the duelling distance (twenty-seven yards, three inches).

It hits where you aim, therefore, at that distance, it shoots practically the same at the nearer distances.

Beyond the twenty-five metres, however, it begins to drop very rapidly. I have watched where the bullet strikes when the man target is

missed in an open field. The bullet strikes the ground less than a hundred yards off, showing that it has dropped the height of a man's shoulder (say over four feet).

The .22 hits the ground nearly two hundred yards off under similar circumstances.

I had exceptional opportunities to watch this, as my man target stood out in an open park, where there was no necessity to have a butt behind it.

As it is not usual to shoot a duelling pistol beyond twenty-five yards, or a .22 pistol beyond fifty yards, there is no necessity to make any alteration in the sighting at that distance, but if extreme accuracy is desired at any one distance the hind sight can be filed for that special distance.

The automatic, however, has a very powerful cartridge which shoots accurately several hundred yards.

Now the way I use my "big game" rifle is: when at a distance at which the drop of the bullet would make it fall below the body of the game when I aim at it, I judge how much I must aim above and shoot accordingly.

The advantage of this is that you are ready at any moment to shoot. If the animal is close and therefore dangerous, you can aim straight at him. If he is far you aim above him.

If he suddenly comes close you merely have to aim at him. This is the principle on which the United States Army Automatic is sighted, one immovable back sight.

Most rifles and some automatic pistols are sighted differently.

They have leaves or other adjustments to the back sight, so that if you want to shoot at long range you estimate the distance, look at the hind sight which is marked in distances, and either raise the leaf marked for that distance, or else slide or screw up the back sight for that distance.

This is all very pretty theoretically, or for deliberate target shooting, but in practice it is dangerous.

As an instance, you are out shooting, and see a stag 250 yards off, as you estimate.

You fix the back sight of your rifle for that distance, and begin taking a careful aim.

At that moment there is a grunt, you look up and there is an old wild boar (a solitaire, very savage) charging at you from twenty yards off.

If you fire at him with your 250 yards' sight up, you miss him and he has you. But if you are shooting on my principle with a fixed sight for close range, you would be aiming two feet above the stag when the boar started charging, and all you would have to do is to shoot at the boar's chest, and he would drop and you could then fire at the stag, as he galloped off.

A leaf of the back sight may get put up accidentally, and you do not notice this when firing at short range.

The chief danger is from an enemy near you. You ought to have your sights right for him, the

distant one is not so important to hit, if you forget to aim high for him.

How often soldiers are told to put up their sights for a thousand yards' range, and then have to start shooting at a close enemy and *forget to alter their sights*.

My advice is to have nothing to do with elevating back sights.

As the duelling pistol has such an extreme drop, it will accustom you, if you shoot it at various distances, to aim high or low according to the distance.

When you come to the automatic you will find, except for very exceptionally long shots, you need not alter your elevation of aim at all; it shoots practically straight up to the furthest you are likely ever to have to use it.

Less than forty yards and generally at a few feet off is the range for pistols in actual combat.

The further the object shot at, the more accurate the aim must be to hit it.

It is difficult to do snap shooting with a pistol at one hundred yards, though one can do very accurate snap shooting with a rifle at that distance.

The reason is that the rifle has a longer barrel, so that a slight fault in the alignment does not so much matter, but with the short barrel of a pistol a hundredth of an inch wrong in the sighting, at one hundred yards, makes over twelve inches error where the bullet strikes.

In other words, an error of a hundredth of an

inch in alignment in an automatic pistol at one hundred yards, would make the pistol miss a target twelve and a half inches in diameter, whereas a rifle at the same distance with the same error of alignment would graze the edge of a target two and a half inches in diameter.

The pistol is more than four times more difficult to shoot than the rifle atone hundred yards, owing to its short barrel magnifying the error nearly four to five times more than the long barrel of the rifle.

To compare a pistol with a rifle target at one hundred yards, the rifle target bull's-eye would have to be reduced to a fifth of its diameter, leaving the bullet holes where they are, or vice versa, the pistol target bull's-eye would have to be magnified five diameters, leaving the bullet holes where they are.

This means that in shooting a match at a hundred yards, the rifle would have to be given a bull's-eye a fifth the diameter of the pistol target, the outside rings of the target in proportion, or the pistol must shoot at twenty yards, against the rifle at one hundred, both having bull's-eyes the same size.

This confirms my experience that to hit a foot diameter bull's-eye with a pistol at a hundred yards, is about as difficult as to hit a two and a half inch bull's-eye at the same distance with a rifle. Of course standing position is meant. With the prone position for the rifle it is too great a handicap on the pistol.

CHAPTER XXII

THE AUTOMATIC PISTOL

Now that the pupil has learned how to handle the single-shot pistol with safety to himself and others, he can be trusted to learn how to shoot the automatic pistol. (See Plates 7 and 13.)

Before giving such instruction, it is necessary to explain what an automatic pistol is, and in what it differs from a single-shot pistol.

The first pistol, as the first rifle, was naturally a single-shot one.

The pistol and rifle both proceeded in development along the same lines.

First the match-lock, wheel-lock, flint-lock, percussion lock. Then through muzzle-loader to rim fire, pin fire, to central fire breechloader, hammer, hammerless, and ejector.

The double barrel, and multi-barrel, and from smooth-bore to rifled bore, were evolved at the same time.

Here the pistol and rifle parted company slightly; though the principle was the same in each case, it was differently applied.

The rifle became a magazine loader, and it will

next be an automatic loader (though at present automatic loading is principally used in machine guns and low-power rifles).

The pistol, instead of becoming a magazine loader (in the sense of being loaded by cartridges brought up from a magazine by operating a bolt), became a revolver—that is, the cartridges were fired out of the magazine instead of being first inserted into the barrel from a magazine.

When cartridges are inserted into the barrel, there is no escape of gas at the breech when they are fired, but when fired out of the cylinder of a revolver, there is an escape of gas at the juncture of the cylinder and barrel, which varies, and when such escape of gas occurs it causes weak and low shots.

The cylinder cannot be made gas tight, as that would prevent its revolving, or coincide absolutely with the calibre of the barrel, consequently a revolver can never be as accurate as a single-shot pistol.

This defect in the revolver was its weak point in comparison with the magazine-loading rifle.

Just before the war, I shot two makes of military full-charge automatic rifles, which were very good, but the war has put an end to their development for the present. Undoubtedly the rifle of the future will be an automatic.

The principle of an automatic firearm can be best explained by the analogy of the automobile.

The revolver, which is a magazine pistol, can be

fired only after each cartridge is placed in position by the action of cocking the hammer with the thumb, or by double-action trigger pull.

The internal combustion (the automobile engine) operates by the explosion operating the various parts.

The explosion in the cylinder of the engine drives the piston rod forward, which turns the crank, which, turning the fly-wheel, drives the piston rod back ready for the next explosion.

In the automatic pistol, the recoil from the explosion drives the working part of the pistol back against a strong spring. As soon as the force of the explosion is spent, this spring forces the working parts back into place again. These working parts do all the work the shooter does in a single-shot pistol—that is, it cocks the pistol, opens the breech, extracts the spent cartridge, inserts a fresh cartridge, and closes the breech.

The idea is very simple, and has occurred to almost everyone who has handled a pistol or a rifle, but there are mechanical difficulties which are only just beginning to be overcome, and the automatic pistol, and still more the automatic rifle, are yet far from perfect.

The chief difficulty is the force of the explosion. In a motor-car engine, the force of each explosion can be regulated so as to be just sufficient for the work required.

In an automatic pistol this cannot be done. The force of the explosion is that which gives the

best shooting, in other words the greatest possible force, subject to the shooter being able to stand the recoil and the pistol not to burst, though made light enough to be easily handled.

If a pistol were made a ton weight, it would fire a very much larger charge without bursting, but the charge of the explosion has to be limited to what a pistol of some two and a half pounds' weight can bear without bursting, or recoiling too severely on the shooter.

The smaller pocket automatic pistols are lighter (the two-and-a-half pound ones are military pistols).

A pistol weighing under two and a half pounds can shoot only a small charge with light recoil, and so is easier to make.

The heavy recoil from a military rifle (which gives the bullet a speed of some thirty thousand feet a second) would shatter the recoil mechanism of a small pocket pistol, though the latter can quite safely operate under the slight recoil of its weak cartridge.

With a magazine rifle or revolver, the shooter uses just sufficient manual force to operate the mechanism, and even then pistols and rifles may get damaged by a clumsy man using too much force to wrench the weapon open or slam it shut.

If, instead of the intelligently applied strength of a man, using the minimum force necessary, you substitute the smashing blow (several tons' weight

to the square inch) given by the force of gunpowder, to operate delicate mechanism, you can realize the difficulty the inventor has to contend with.

It is as if you have to invent a firearm which would operate if, after each shot, you threw it under a passing railway train.

CHAPTER XXIII

THE MECHANISM OF THE AUTOMATIC PISTOL

WHAT the maker of the automatic pistol has to do is to restrain the sudden smashing blow of the explosion on his mechanism and have it operate gently. (See Plates 13 and 14.)

The safety of the shooter depends greatly on *the breech of the pistol not being opened till after the force of the explosion is spent.*

If the breech is opened before the force of the explosion is spent, it will drive the cartridge out like a bullet, and the pistol will in fact be shooting from both ends at the same time.

Now will be seen why a very light-charge rifle or pistol is easier to be made a practical automatic firearm.

With a very light charge, the explosive force is so light that, as long as it does not instantly blow the breech open (but retards it ever so slightly), there is no harm done.

Rifles and pistols have long been made to shoot light charges that do not need the breech securely locked during the discharge, and are perfectly safe to use.

The original automatic pistol operated as follows: The discharge drives the mechanism back against a spring at the same time that it blows open the breech, which the recoil spring then closes, inserting a fresh cartridge. The spent cartridge is blown with some force sideways out of a slot at the side of the mechanism, so that it may not hit the shooter in the face.

In some makes of pistol, the cartridge is not blown out but merely dropped out.

With a suitable charge the breech-closing mechanism can be made heavy enough for its inertia to keep the breech closed sufficiently long after the discharge.

When it comes to such heavy charges that it is necessary to keep the breech closed till the force of the explosion is spent, the difficulty of making a safe automatic firearm begins.

With a military full-charge rifle this has hardly yet been arrived at, hence the delay in its being used for military purposes, but it seems as if the problem is on the point of being solved.

For the comparatively weak recoil of a pistol, this does not apply. There are several perfectly safe pistols in use, and there is no danger in using any of the well-known makes.

Some makes of automatic firearms, instead of using the recoil for operating the mechanism, have a small tube alongside the barrel, which communicates by a minute hole with the bore of the barrel near its muzzle.

The breech does not open till the bullet is just passing out of the barrel, past the hole into the tube, and therefore the expansion of the gas of the explosion loses its force.

A small fraction of this gas rushes through the hole into the tube and operates the mechanism.

This has been the principle I have always worked on in trying to solve the problem of an automatic firearm.

One system uses the recoil, tempered by a buffer, to modify its force.

The other consists in diverting enough gas from the big explosion to operate the mechanism gently.

It is conceivable that by this latter system it would be possible to convert the explosion of a siege cannon into a force just strong enough to break an egg, and that by two such divisions of the explosion, one would open the breech and the other close it, without the necessity of any anti-recoil mechanism at all on the principle of the slide valve of a locomotive steam engine. (My grandfather, Ross Winans, invented the locomotive slide valve, not Stevenson.)

I think I am right in saying that this system has not yet been applied to automatic pistols, and that they all operate on the recoil, driven back by a compressed spring.

A fault in every automatic pistol I have yet seen, is the difficulty of first loading it.

The cartridges are carried in a clip, which is inserted in the butt of the pistol and drops out on

pressing a button. Most automatic pistols indicate when this magazine is empty and the pistol unloaded.

This is very good, but what I complain of is that, after the magazine is full, you have to bring the first cartridge into the barrel by hand, after the first shot the cartridges are fed into the barrel and the empty ones ejected, automatically.

When getting the first cartridge ready to fire in a revolver you accomplish it in cocking the pistol, and with a magazine rifle by working a bolt or lever.

But with an automatic pistol, if the hands are wet, cold, greasy, or weak (as a soldier with blood on his hands and weak from a wound), it is impossible to get the first cartridge into the barrel, or get the pistol ready to shoot.

The operation in automatic pistols begins by taking the pistol *in both hands*. (Compare with cocking the revolver with one hand.)

Then you hold the stock firmly with one hand, and grip the slippery barrel of the pistol with the other hand, and use considerable force to draw the barrel back against the strong compression spring.

Your only assistance to get a grip is a slight corrugation on the barrel, only wide enough for your thumb and forefinger to hold.

Imagine trying to pull hard with only your forefinger and thumb gripping a smooth and possibly slippery surface, with a cold, wet, or greasy hand.

Let any one grease the automatic pistol and his hand and see if he can perform this operation. Sandow, no doubt, could do it, but not the average man.

The magazine rifle is purposely made with a bolt like a door bolt, so that it can be operated easily under all conditions, but the automatic pistol, evidently to give it a neat external appearance, has no projection to take hold of to drive back the slide, which, besides, takes more strength than is required to operate the bolt of a magazine rifle.

The remedy is simple: have two small projections, one on each side of the corrugated grip on the barrel, so that the shooter can get two fingers one over each side of this grip and, holding the stock in one hand, draw back the slide with his other hand, with a perfect grip under all conditions, like bending a crossbow.

As to the shape and angle of the stock, inventors and shooters are at constant war.

The inventor is thinking of his mechanism; he makes his stock at the best angle, shape, and size to suit what he puts inside it. It is much easier to construct apparatus to feed cartridges into the barrel at right angles than at an acute angle.

Therefore, the inventor generally gives the shooter a stock unsuitable to do good shooting with.

The inventor should work in combination with the shooter. The shape of the pistol externally should first be decided on by the shooter, so as to

be the best possible for shooting. In my opinion this should be the shape of the French duelling pistol of the Gastinne-Renette pattern. (Plates 2 and 9.)

The inventor should try to design his pistol to fit, as far as possible, into this external shape.

Some points, as the distance of the trigger from the finger, and the slope and form of the butt, cannot be departed from without injury to accurate shooting and quick handling of the pistol, and yet these are the very things inventors alter.

Other points the shooter may give way in, if such modifications are of vital importance from the inventor's point of view.

The reverse procedure is, however, the rule. An inventor generally has no knowledge of shooting, or horses, or whatever else his invention applies to; he is merely a clever mechanic. He has "imagination" and theories. Generally, such theories are most grotesque and childish.

I will instance an invention relating to horse-shoes.

The inventor showed me a sort of bird-cage of iron and said it was a horse-shoe.

He informed me that shoeing horses as at present practised is wrong. "It is brutal to nail shoes onto horses' feet. How would you like to have an iron shoe nailed on the sole of your bare foot?"

I tried to explain to him that the outer horn of a horse's foot has no feeling, that a horse is hurt only when the farrier is clumsy and drives a nail into

the sensitive inner tissues of the foot, but he was too far absorbed in his theories to listen to me.

He then went on to show me that his shoe needs no nailing on, that it has clamps, fastened by thumbscrews which clasp the horse's foot and grip it by claws "just below where the hair grows," to use his expression.

I explained to him that this (the coronet) is the most sensitive part of the horse's foot, to press there would give him great pain and cause him to go lame, and finally his foot would die and drop off.

Also, that these clamps and thumbscrews would strike the horse on the opposite fetlock and throw it down, and the centrifugal force would cause the shoes to fly off when the horse was going.

Finally, that these shoes were hideously ugly and no horseman would care to be the laughing stock of everyone by taking his horse out with such things on.

The inventor merely said: "All you horsemen are the same. You merely follow each other without any imagination," and he went out, to get the same reply from every horseman he met.

He was firmly convinced that people who have to do with horses all their lives are fools and never think of what is best for the horse, but it rests with men like himself who have "imagination" to show us horsemen how to shoe and handle horses.

CHAPTER XXIV

PECULIARITIES AND FAULTS OF AUTOMATIC PISTOLS

Before purchasing an automatic pistol it would be well to try shooting several makes. Inventors have not yet arrived at anything like a standard shape. The grip, angle of stock, distance of trigger, etc., all vary, and you can decide what suits you best only by actual trial.

Handling the unloaded pistol is not enough. I was once trying an automatic military rifle and found it balanced and handled very nicely.

In order to test it in rapid fire I tried it against a magazine rifle to which I was accustomed.

For merely "loosed off" it beat the magazine rifle, but I wished to try it for accuracy and speed combined.

The test was to shoot at the "Running Deer" Bisley, to empty the magazine at one run of the deer.

The deer runs at a speed of fifteen miles an hour during five and a half seconds at a distance of 110 yards from the firing point, across the line of fire.

With my magazine rifle I got off five shots,

making four hits, wasting much time with the loading.

With the automatic rifle there was not an instant wasted in the loading; the difficulty was in getting the shots to go anywhere near the deer—in fact, I could not hit the deer, except with the first shot.

At each shot the rifle tried to jump out of my hands, twisted itself round to the right and then suddenly twisted the other way. The tighter I gripped the more it wriggled about.

Instead of the sights coming down back to alignment, after the recoil, I found they jumped clean off the deer and I had to go hunting about to get my aim again.

Instead of, as with a well-balanced double rifle, the muzzle flying up at the first shot and dropping down into place for the second shot, there was no possibility of alignment without a fresh aim for each shot.

It was just as if you have a strong unruly child in your arms trying to set him down on a chair.

He wriggles from side to side, stiffens his back, and you cannot seat him on the chair.

This is just how the rifle acted. It wriggled and struggled and refused to let itself be aligned on the target.

The inventor also tried shooting it and missed even with his first shot. The fault lay in the way the recoil was taken up.

To make an automatic rifle which will shoot accurately in rapid shooting, the recoil must be

straight back, not with a twist and wriggle from side to side.

When choosing an automatic pistol, shoot it and find out if it lets you align your sights afresh immediately after you have fired. If you find it cants over or tries to go home into its holster at each shot, and you have to alter this cant before you can fire again, do not buy it.

Get the gunmaker to instruct you thoroughly in the mechanism of any automatic you buy and especially what parts need special attention to prevent its jamming.

Jamming is the constant bugbear to fight against. The automatic pistol must always be kept in perfect working order and the parts properly cleaned and oiled.

The barrel in some is difficult to properly clean internally, unless taken apart, and it is difficult to re-assemble.

Unless all the parts work freely, a weak cartridge is apt to prevent the pistol closing properly.

When you have learnt the mechanism from the gunmaker you can begin practising shooting with the pistol.

The principal thing you have to remember is that, whereas a single-shot pistol, when you have taken out the cartridge, is unloaded and safe, and a revolver when you have emptied the cylinder is also unloaded and safe, when you have taken out the magazine with its cartridges from an automatic pistol, the pistol *may still remain loaded.*

With the automatic pistol, when you have drawn back the slide and thereby loaded a cartridge into the barrel, that cartridge *remains in still when you withdraw the clip full of cartridges.*

I give herewith a description of the Colt New Safety which obviates the danger of leaving a cartridge inadvertently in the automatic pistol.

"Figure 1 shows the pistol in cocked or firing position, magazine withdrawn and cartridge in barrel chamber.

"Figure 2 indicates position of the magazine when inserted in handle of the pistol, and position of firing mechanism when safety-disconnector is forced forward by the inserted magazine.

"When the magazine is *removed* (see Figure 1), the plunger acted upon by its spring forces the safety-disconnector to the rear. This movement forces the rear end of the connector (A) *below* the nose of the sear (B) so that should the trigger be pulled, the connection between trigger and sear being broken, that is, the rear end of the connector (A) being *below* the sear nose (B), the trigger cannot operate the sear, consequently no discharge of the piece can occur.

"When the magazine is *inserted* into the handle of the pistol (see Figure 2), the curved top of the forward portion of the magazine forces the safety-disconnector forward and permits the rear end of the connector (A) to rise in *front* of the sear nose (B) in the normal position for firing. A pull on the trigger causes the sear to turn upon its pivot so

that the firing pin is released and strikes the cartridge."

PLATE 7. COLT NEW SAFETY DISCONNECTOR AUTOMATIC PISTOL, .25

The firing mechanism consists of the trigger with its connector which releases the sear; the sear which releases the firing pin when the trigger is pulled; the firing pin (there is no pivoted hammer in this model), and the safety-disconnector with its plunger and spring. This disconnector is part of the calibre .25 only.

To unload an automatic pistol, withdraw the clip of cartridges and then draw back the slide and extract the cartridge remaining in the barrel.

Till this latter is done the pistol is still loaded and dangerous.

The automatic pistol is a very delicate instrument and apt to go wrong at the most critical time.

The revolver used to be grumbled at, but (if it did not fit too tightly) even when it jammed, it could be cocked and worked by using extra strength, opened by striking it over the thigh, etc.

But an automatic cannot be forced, it must be operated with knowledge of exactly just what has gone wrong.

Any one taking up automatic-pistol shooting seriously should go to a gunmaker and learn all about its mechanism so that he will know what is wrong when the pistol refuses to operate.

Each make of automatic varies, so I cannot give elaborate instructions as to handling. Each make may have some point where it is simpler and superior to others though in other respects it may be inferior.

In the following remarks I mention what I consider best from a shooting, not a mechanical, point of view. The latter is undergoing constant change, and the automatic pistol has not yet arrived at a standard type.

There are some points in which even the best automatic is at present imperfect, and some in which it is dangerous to spectators—for instance, the very strong ejection of the fired cartridge in some makes, which may destroy the eyes of persons standing near enough to be hit by the spent cartridges as they are ejected.

I know of an automatic rifle which ejects its spent cartridges with great force, and another which merely lifts them out, as if they were spilt

over the edge of the ejector slot, no force being used. This is the way ejecting should be done.

Such ejection would be very useful on an automatic pistol; now, if near a man shooting them, they, even the best, hit one quite hard with the spent cartridges.

This gentle ejection is a patent and is done by a very weak spring in the extractor which tips the cartridge out at the right moment; the ejection is not caused by the back blast of the powder, or the drive forward of the carrier, as in other automatics.

CHAPTER XXV

FINAL PRACTICE

WHAT I am about to describe is very dangerous, even for a good, cool shot, and should not be attempted by any but an expert.

It is practice for instantaneous shooting when taken unawares.

Put up a full-sized man target at fifteen yards. Buckle on your holster, with the loaded automatic in it, the safety bolt at "safe." Button the holster.

Stand with your back to the target, get your pistol out and put all your shots into the target in the shortest possible time.

This practice can be made still more difficult if as many man targets as your magazine holds cartridges are placed at various distances; hit all of them in the shortest time, taking them, not in rotation, but at random.

At "go" you turn and in so doing unbutton the holster flap, drawing the pistol, taking off the safety, and firing—all in one movement.

Occasionally, instead of firing all the shots, slip in the safety, and return the pistol to the holster after one shot.

See how quickly you can draw, shoot, and return to holster "all safe."

The idea is to make the movement of drawing, taking off the safety, firing, returning the safety, and putting back in holster, all one continuous movement, and as nearly instantaneous as possible.

The safety should be off as the pistol gets clear of the holster; similarly the safety should be on again the instant the shot is fired.

If you are using a pistol having the additional safety squeeze in stock, there is far less danger in this practice, as this pistol squeeze only occurs as the trigger is pressed.

This is the only sort of practice I know of where an automatic pistol is safer than a revolver.

In drawing a revolver, if it is a single-action one, there is danger of its being fired by accident in cocking, and especially in putting back to half cock, if only one hand is available to do this.

With an automatic the safety can be put on or off without danger of an accidental explosion, and the Regulation U. S. .45 Army Colt cannot be fired till the grip is squeezed as well.

A musician has an advantage in this practice, as he uses his fingers and thumbs independently of each other.

In practising this exercise with a .45 Colt U. S. Army Automatic, be sure to draw the pistol without any pressure on the safety at back of stock, only push the thumb safety and put the pressure on the other release only as you fire.

You can practise this with an empty pistol with a pad of rubber to take the blow of the falling hammer so as not to break the mainspring. As you draw, push the safety off with the thumb, pulling the pistol out with the fingers against the front of the grip, so as not to touch the back safety lever, and squeeze that with your palm in firing.

Keep in mind that the pistol is safe so long as you do not press the palm of your hand against it, even when the slide safety is off.

In all this practice remember speed is the one object, as long as you can hit the figure that is all that is necessary. To hit the enemy first is the all important thing, to hit him *after* he has hit you, on account of wasting time in taking a good aim, is a fatal mistake.

For extreme speed you can fire the moment the pistol is in the direction of the target even before you have raised your arm, continuing the raising of the arm as you fire and getting the next shot in as an aimed one.

Even if the first shot is a miss it disconcerts the opponent and may prevent his getting in a shot on you before you have time to fire the second shot.

CHAPTER XXVI

EXHIBITION SHOOTING

In my *Art of Revolver Shooting* I did an unintentional wrong to a stage shot.

In the book I gave details of how to do legitimate stage shooting, and also exposed the devices of those who perform conjuring tricks, which the public mistake for genuine shooting.

There was a review of my book in one of the daily papers, in which the reviewer gave extracts of how some of these fake-shooting feats were done.

The next day I received a most indignant letter from a "Lady Champion Shot" telling me that when she was giving her exhibition at a music hall, people in the audience, after each feat, shouted to her "I know how that's done," and that she had lost her job in consequence.

I do not know the merits of the case, as I never saw her shoot, but I will not explain any more stage tricks, as I do not want "Stage Champion Shots" to lose engagements. Shooting men can see for themselves if any of these shooting exhibitions are genuine, and if fakes amuse the public, what does it matter?

For hitting small objects with extreme accuracy at short range for exhibition purposes, I find the larger the bullet, providing it is propelled by a small charge which has no recoil, the easier to make hits with.

The big bullet cuts into say the ace of hearts, where a smaller bullet would just miss it.

Six well-placed shots with a .44 French duelling pistol shot at five yards would make one hole, whereas six .22 bullets hitting exactly the same centres would make six distinct holes, close together, but would not be the sensational "all the shots in one hole" like the former score, which audiences talk about afterwards.

Nowadays, with the wax bullets driven by fulminate out of a duelling pistol, shooting off the heads of assistants can be done with very little risk except to the eyes, whereas with a leaden bullet a bad shot means the death of the assistant unless provided with a steel skull cap under a wig.

In spite of the advantage of the big bullet, most stage shooters use the .22 calibre pistol.

It may be that they have some contract with the makers to use only their make of pistol, or it is a tradition because Chevalier Ira Paine used it, but why any one with a free hand uses it in preference to a .44 I do not understand.

I cannot do as good shooting with a .22 as with the larger calibres, and I have, I think, specimens of all makes of pistols and have shot them all.

I was a pupil of Chevalier Ira Paine, who was an incomparably better shot than any of us at stationary targets, and unique in that I never saw him make a bad shot, and he has won (which no other man has succeeded in doing) *both* the Duelling Pistol *and* the Revolver Grand Medal at Gastinne-Renette's Gallery in Paris. Both are better scores than any ever made before or since. There is also a seven-shot score with all the bullets into a shamrock-shaped hole at sixteen metres, made by Ira Paine, framed at Gastinne-Renette's.

He was shooting for the Grand Medal d'Or when he made this seven-shot score. They were such a phenomenal group that he was asked not to continue on that target for fear of spoiling it.

As he shot so extremely well with the duelling pistol, and as I know no score of his with the .22 to equal his work with the duelling pistol, I do not understand why he did not use the latter for his stage work.

One of his most sensational feats was for his assistant to hold a playing card, the three of hearts, horizontally. Paine hit the outside pip first, then the middle one, and finally the one next the fingers, which were about a third of an inch from it.

This, in artificial light and reserving the most dangerous shot for the last, required nerve, and he did this the night before he died, when he knew his case was hopeless.

As I said, he was the only man I ever saw who did what heroes of novels do. That is, he never missed or made a bad shot during all the years I saw him shoot.

CHAPTER XXVII

CONTROL OF TEMPER

Pistol shooting is excellent training for control of the temper. Boiled down to its essence, pistol shooting is *fighting* either in earnest or in competition.

Whilst therefore self-control is essential in all sport, in pistol shooting it is vital. When a man loses his temper he is at the mercy of his opponent.

Temperaments differ: a word or act which has not the least effect on one man's temper irritates another till he gets beside himself.

How often one hears a man say: "I don't know what I have done, but X. seems offended with me."

Some take offence at very little, while with others nothing can make them lose their temper.

I know a man who never has even a shade of annoyance pass over his face whatever happens. He is in constant request for shooting in teams, and he can be depended on always to shoot up to his form. When his team seems hopelessly beaten he calmly makes a string of bull's-eyes.

This is the ideal state of mind, the control of

one's temper all should have, and nothing trains for this like pistol shooting.

In the prone position with a rifle a man may be agitated but his brain still enables him to shoot well, but when standing up and having to depend on the muscles and nerves of his right hand and arm alone, self-control is all he has to rely on.

Self-control becomes second nature to a pistol-shot. Control of the temper and nerves is greatly hindered in cases where nicotine, alcohol, or other drugs are used. These drugs do not give the nerves and brain a fair chance.

Loss of temper is considered proper and a sign of authority by some, and loss of temper has even (most profanely) been considered by some as an attribute of their deities.

Formerly masters of hounds, if the Field did anything wrong, flew into an ungovernable rage and used disgusting language.

Nothing can be done properly when a man is in this state of mental unbalance, and many a fox has owed his life to the huntsman having lost his temper with his Field or his horse.

I am told certain games are very trying to the temper. Golf, for instance, has even led to the reprimand of a churchwarden by the committee of his golf club for using profane language.

I have seen very amiable people sit down to play bridge and after they have played for half an hour they exhibited the most vile tempers.

A pupil and coach after working hard all one

morning decided to take a little relaxation in a game of croquet. The pupil lost his temper and hit the tutor with his mallet.

A prize fighter was in the habit of—in doubtful taste (to use a mild euphemism)—taunting his opponent during his fights in order to make him lose his temper and consequently his judgment.

These unpardonable tactics do not, however, always succeed. A man may feel angry without losing self-control. In fact "cold anger" braces up a man and his nerves become as iron and he becomes as implacable as Fate.

Some are extremely nervous and shy. They can shoot very well when by themselves, but if others are present they cannot do themselves justice, and they cannot shoot well in a competition. They are too flabby.

Nervous men should always have people present when practising, and vary their audiences as often as possible, so that they will not get "stage fright."

The fault of others is extreme irritability. They shoot well till something annoying happens, a shot unexpectedly fired near them, a jamb of the pistol, the wind blowing the target down, or other trivial matters which do not trouble any one else.

This, however, starts them fuming and swearing (an oath is a sure sign of want of self-control). Everything that happens, the most trivial thing, adds to their *énervement*, as the French call it.

Their nerves get all in a jangle and they cannot

shoot. Tobacco is often found to be the cause of the above state of mind. It takes a mere nothing to get a heavy smoker unbalanced.

The worst form of nerves, and almost impossible to overcome, is that when a man fancies people are "slighting" or "insulting" him.

He begins by shooting well and is in a good temper. Someone unfortunately makes a perfectly innocent remark or does something which seems quite innocuous to others.

But the man at once changes his manner, thinks he has been "purposely insulted" or "hampered," but he says nothing. The man who flies out at others is easier to manage, as you know what he complains of. But this man nurses his wrong and broods over it without letting any one know his grievance. He sulks, frowns, does not answer when spoken to, and his shooting goes to pieces, and he ruins the pleasure of the others. After all we are shooting for mutual pleasure and sport.

There is the flabby man who can win when he has it all his own way, but cannot make an effort when tackled. He is what is called a "rogue," not in the offensive sense but in racing language.

The man who surprises others is the quiet easy-going good-natured man who never wishes to hurt or annoy any one, but only wishes to be left in peace.

This is the Eastern or Russian temperament: "Nichevo" (never mind); "Sechas" (presently).

Some men get into the bad habit of saying what

they imagine are "smart" things, but which are really impertinent and hurt others' feelings.

This becomes such a habit with them that they do not notice that they are getting themselves hated as much as if they went about flicking people over the shins with a whip.

Some writers of plays which are supposed to be full of wit make their characters do nothing but say unkind things to each other. This is not wit but stupid, callous cowardice, which could not occur in countries where duelling is allowed.

To resume, the good-natured man who is not understood, whose good nature is mistaken for softness, sometimes surprises people.

His opponent, either because he is one of the sort who say "smart" things, or because he is losing his temper, says something which *at last* wakes up the good-natured man. The latter says nothing, does not change his expression of good nature. He merely begins to shoot like a machine, his arm rises like a steel rod, each shot goes into the middle of the bull's-eye, there is no hesitation, dwelling on the aim, or doubtful bull's-eye.

He has, in becoming angry, pulled himself together, his whole mind is concentrated on one sole object, making the best score and beating his insulter, and he shoots the best score of his life. To compete against him is like competing against Fate.

After such an incident, I saw a beaten competitor go up to the winner, and congratulate him.

He added, "I thought I had you beaten that time." The other answered, "So you had, if you had not insulted me."

If you make a man "see red" whilst still keeping his temper, that is the most dangerous man in the world to tackle. Sir Henry Irving portrayed this when acting in the *Corsican Brothers*. I have never seen another actor succeed in doing so.

In order not to hamper your adversary in a competition, it is of the utmost importance to study every one of your words and acts. What does not worry one man may entirely put another off his shooting. Moving about whilst he is shooting, leaving the firing point as he is firing, is enough to put him off his shot, and should be strictly avoided.

It is best to keep well away from him and only go up for your shot and not address a word to him or speak to any one within his hearing, until he beats you, then be the first to congratulate him.

CHAPTER XXVIII

THE EFFECT OF ALCOHOL AND NICOTINE ON SHOOTING

In order to obtain the best results in shooting, a perfect co-ordination between the brain, nerves, and muscles is necessary.

A man who drinks heavily may for a time be able to shoot well, but this does not last. He can never be depended on not to "crack up" and he collapses at critical moments.

Very robust health is not necessary as long as the above conditions are fulfilled, and pistol shooting in the open air may be of benefit to a man who is in too delicate health to be able to play even a gentle game.

The old, evil days when a sportsman was not considered acting as a man unless he drank several bottles of port each evening and had to be carried home in a wheelbarrow are now, happily, gone for ever. Putting drink before all else used to be a constant annoyance. A drunkard was not content till he had reduced every man near him to the same disgusting mental and physical condition.

If others would not drink with him, he had the

utmost contempt for them. Called them "milk-sops," "drinkers of slops," "unsociable," and "too proud."

I always refused to go out shooting with such people. Besides being very dangerous, they never would do anything but drink. Sport was a mere excuse for going out "on the drink." Every occasion was made the excuse for a drink. With such people drink was the great event of the day, and if a stag was shot, there was a ceremony to be gone through of everyone drinking whiskey neat to "more blood."

At lunch, after an interminable time spent in drinking—they eat little—the forester who had been fidgeting to get off, would come up at last and timidly say, "I'm thinking the sooner we go the best, I am seeing a verra heavy beast in yon corrie, with the glass."

The "sportsman" would answer, "Is there? open the other bottle of champagne and help yourself, it won't hurt you, there is not a headache in a dozen bottles."

Drink used to pose as the twin brother and boon companion of sport.

In these days drink is known as the sportsman's deadliest enemy.

I consider even minute medicinal doses of alcohol are deleterious to shooting, entirely apart from drunkenness. Admiral Jellicoe, speaking at Gibraltar in 1911, quoted with approval a statement of Captain Ogilvy, the noted gunnery

instructor, to the effect that carefully compiled statistics revealed the fact that the shooting efficiency of the men was thirty per cent. better before than after the issue of the grog ration . . . one eighth of a pint of rum liberally diluted with water.

In Bavaria the Minister of War carried out tests as to the effect of alcohol on markmanship during twenty days on twenty marksmen (shortly before the war), 80,000 shots were fired, and the trial showed according to the report of Professor D. R. Kräeplin, that the consumption of forty grammes of alcohol, corresponding to the amount contained in one and three quarters pints of beer, made an average reduction in marksmanship of three per cent. The effect was most perceptible twenty-five to thirty minutes after absorbing the alcohol.

Most of the marksmen shot even worse, some of them from eight to twelve per cent. worse.

The Professor continues: "An amusing feature of the tests was that *some of the riflemen insisted not only that they could, but actually were shooting better after drinking the spirits, whilst in reality their marksmanship had fallen off as much as ten per cent.*

The late Sir Victor Horsley permitted me to quote the following from one of his lectures.

The cerebral activity of taking alcohol lasts only a few minutes, then marked slowing sets in, and for the rest of the time during which alcohol acts, varying from two to four hours according to the individual,

the cerebral activity is diminished. It took longer for a person who had imbibed small quantities of alcohol to think, the evidence was overwhelming that alcohol in small quantities had a most deleterious effect on voluntary muscular work.

These facts bear out in every particular my own observations in watching others.

I find they are not so active in their movements, especially if they have to turn round suddenly to shoot, but at the same time they had more confidence in their ability to shoot.

Who has not seen (to go to the extreme case) when a large dose of alcohol has been swallowed and a man is "under the influence of liquor" that the "patient" is ready to fight all comers, although he cannot stand on his legs.

As Professor Kraeplin says, "the subject experimented on cannot judge—he thinks alcohol makes him shoot better although the actual facts are the other way about."

At the Olympic Games which take place each four years, the members of the United States Rifle and Revolver Teams which compete are water-drinkers and non-smokers, and they are practically unbeaten to date.

Major Smith W. Brookhart of the Ordnance Department, United States National Guard, writing in *Arms and the Man*, May 4, 1918, says: "Civilization has advanced so much in the past decade, that it is now almost superfluous to write

a caution against the use of stimulants. Every rifleman will admit that alcohol is an enemy. Total abstinence, *bone dry*, is the only safe rule. Tobacco or any other stimulants should also be avoided. They may not be so fatal as alcohol, but they all tend in the wrong direction. The man who wants to climb into the championship class and stay there must be a normal man. The proper attitude of mind will give every man more pleasure in conquering a habit than in submitting to it. To win over the smoking habit is an achievement of which to be proud and it improves the scores."

Those who make a moderate use of alcohol and tobacco are gradually reduced as to the quantity they use some weeks or even months before the actual Games, until all the members of the teams are non-smokers and water-drinkers.

There is this to be said of the smoker, as long as you do not try to prevent his stifling you with his smoke he does not pester you to imitate his example like a drinker does.

He merely pityingly informs you that "you do not know what you have missed."

As the "joy" missed consists of chronic sore throat, palpitating heart, and shaky nerves, I cannot see that much is missed by the non-smoker.

The invariable answer to the question "what pleasure do you find in smoking" is "it soothes the nerves."

Healthy normal nerves need no soothing.

When an automatic function of the body is normal and healthy, it does not indicate its presence.

A man does not feel his heart when it is healthy, only when it is diseased.

In the same way a man who has not injured his nerves by nicotine or alcohol does not know that he has any nerves, but on the other hand, nerves being destroyed by narcotics fight back, and make their agony known.

A man would fight against his headache being "soothed" by being clubbed over the head.

As well might one say a man half insensible from concussion needs "soothing" by being knocked completely out. If this soothing of the nerves is persisted in, a man sinks lower mentally than an animal.

A man in the last stage of nicotine poisoning, when told by his doctor, "you must either give up smoking or you will die" answered "then I prefer to die."

What a glorious death! How true the dictum of Sir Oliver Lodge that the supreme outcome of 500,000 years of effort by the Universe has been, man!

The following appeared in the *Daily Mail* of September 25, 1917. It shows how men risk not only their own lives but hundreds of other lives rather than give up smoking. What a blessing if Dr. Furlong's suggestion of nicotine tablets is adopted.

We non-smokers will no longer have to walk

the streets, eat our meals, sit in theatres, and travel in railway trains breathing an atmosphere of tobacco, and burnt paper smoke.

Shellworkers' Craving to Smoke.

To the Editor of the Daily Mail:

Sir: As some men in munition factories will run the risk of smoking in spite of their liability to fines and as others, even if they do not smoke during working hours, carry matches in their pockets, it is necessary to consider what is best to be done to prevent explosions.

I believe that if tablets of nicotine were manufactured, each one representing the drug value of say one cigarette, they would constitute a real safeguard against such accidents. One or two of these tablets would remove the craving for a smoke and check the irritability caused by the want of it.

I do not wish to convey that nicotine tablets would ever take the place of smoking, but they would have the advantage of safety, and no disadvantage that I know of except that they are a little slower in action.

Early in the war I advocated the introduction of these tablets for use in special circumstances, but unfortunately up to the present the idea has not been utilized.

Wm. Verner Furlong, M.D.

16, Pembroke Road, Dublin.

The smoker does not see the selfishness of his behaviour. He looks on the non-smoker as selfish if he protests against being nauseated.

The nicotine tablets will enable the taker to poison himself without also poisoning others.

CHAPTER XXIX

CLEANING AND CARE OF THE PISTOL

In the black powder days cleaning was, comparatively, a simple matter. Now, with the smokeless powders, especially cordite, incessant care has to be taken to avoid the pistol spoiling by corrosion, pitting, and rust.

Even if you have cleaned the bore most carefully after using—the next morning you may find it in an awful state.

The only remedy is to go over the pistol at intervals, after use, and even when it appears perfectly right it should be looked after every few days, to make sure.

Practice with a single-shot pistol entails less time spent in cleaning; if you shoot frequently with an automatic pistol it will keep you busy all your time taking it to pieces and looking after it.

A single-shot pistol is easy to clean. There is only the inside of the barrel to look to, and it is easily got at without taking it to pieces; whereas the moving parts of an automatic all need seeing to. The big bore duelling pistol is much easier kept clean than a .22 bore.

A man practising with an automatic, unless he is very enthusiastic, soon gets tired of the labour and the time it takes to keep it in working order.

I shot with an automatic which had been at the front in the war over two years. It shot extremely well, the owner having taken great care of it during all its rough experiences, but it constantly failed to completely close.

It did not actually jam, but what came to the same thing, it occasionally did not quite close and could not be fired unless it had been closed by hand.

This shows that in the actual work of war there is a tendency for an automatic pistol to become weak in the closing spring, and there ought to be some simple device for increasing the tension of the spring, when necessary.

There may have been some such device on the pistol in question, which its owner and I did not discover.

To really know your automatic pistol, it is best to have a few hours with a gunmaker, taking it to pieces, and learning the use of each part, and how to correct any failure of the pistol to function properly. Otherwise you may, when in an out-of-the-way place, be rendered helpless by a simple fault which could be corrected in a few moments without the use of tools by someone who understands its mechanism.

I saw a man who actually buried a loaded automatic pistol deep in the ground, because it had a jam and he was afraid of it.

CHAPTER XXX

PRACTICAL PISTOL SHOOTING

In England, rifle and pistol shooting are conducted on lines different to Continental usage, owing to the entirely different point of view adopted.

In England big game has been practically exterminated. There are a few fallow deer left in parks, and a few red deer are wild in Devonshire and Somersetshire, and Scotland, but these deer are beyond the means of any but rich men to shoot, and the deer in Devon and Somerset are reserved for hunting with hounds.

There are a few roe deer in Scotland, but these are treated as vermin and killed off with shotguns.

Rooks and rabbits are shot with miniature rifles but the rooks are shot when young and unable to fly, sitting on the branches of the trees near their nests, and the rabbits also when sitting outside their holes.

In England the general public never shoot rifles in sport, except those who shoot sitting shots at rooks and rabbits.

The idea has therefore arisen that the rifle and

pistol are not weapons to use in sport but merely implements at the game of bull's-eye shooting, and that the shotgun is the sporting firearm.

The idea is that a rifle or pistol can be used only at a stationary object.

When the above is realized, it is very easy to understand why in England all rifle and pistol clubs shoot only at stationary bull's-eye targets at known distances.

The reason they adopted the black front sight probably arose because it is easier to make a small black spot in the middle of a white sheet of paper than to paint the whole sheet black and leave out a white bull's-eye.

It was merely a matter of convenience in target-making.

Once however a black bull's-eye on white paper was decided on; the colour of the front sight *had* to be black.

To shoot at a minute object, aim must be at the bottom edge of it "at six o'clock" (so called from the analogy of the face of a watch).

If the aim is taken in the middle of a small bull's-eye, the front sight covers most of it and makes seeing the bull's-eye difficult.

In order to see the front sight best on a white target below a black bull's-eye, the front sight must be black; black against white being the strongest contrast. A white front sight on a white target would be lost.

As a result, all except big game rifles and

English pistols are made with black front sights.

Shooters of big game abroad found a white front sight best, and hunting rifles are now made in England with silver or ivory front sights, but no English pistol has any but a black front sight.

Military rifles of every nation have this conventional black front sight.

Professional experts test military rifles but they test them on white targets with black bull's-eyes, therefore a black front sight is necessary for this purpose, and as the experts are merely expert target shots and not big game shots, this black front sight is retained.

It being customary not to look on a rifle or pistol as of any use except to hit a stationary target, all English rifle and pistol clubs have been formed on this supposition.

At the English National Rifle Association Meetings at Wimbledon and later at Bisley, the "Running Deer" target has been in use from the beginning, but only a very few of us shoot at it.

The bulk of rifle shots have always fought most desperately against any but stationary targets. This is natural. A man who has worked hard all his life to become a "crack shot" at a stationary target is not going to risk his reputation by being beaten by a school boy at a moving target.

At the revolver ranges, moving, disappearing, and rapid-firing competitions were instituted but had very little support; a few men shot, but half a dozen men do not constitute a big enough crowd

to warrant the keeping up of competitions which the bulk of shooters do not want.

On the Continent, shooting under practical conditions has always marked the shooting at rifle and pistol clubs.

Numerous Continental sportsmen, even in humble circumstances, are able to shoot bears, wolves, lynx, reindeer, elk, moufflon, chamois, wild boar, etc., and above all *roe deer*.

It is the roebuck who trains men to be practical rifle shots on the Continent.

In Scotland the roe is classed as vermin and exterminated with shotguns.

The roebuck is, to the middle class Continental sportsman, his highest sport in rifle shooting.

Few men in England, even if they have the means, care for deer-stalking as they know nothing of rifle shooting. They prefer small game shooting with the shotgun which they are more skilful with.

On the Continent the roe is strictly preserved and no does or fawns are ever allowed to be killed.

The roebuck must be shot only with a rifle and not during the close season.

There are societies which have yearly exhibitions of roebuck heads, shot by their members during the current year, and gold, silver, and bronze medals given for the best heads.

A good roe-head in a public place draws crowds who discuss its good and bad points.

I doubt if in England one person in a thousand would know what species of deer they belonged to,

but all would know the difference between a tennis, cricket, or foot ball.

Rifle clubs are in existence all over the Continent to enable members to practice for game shooting.

The club members are sportsmen used to game shooting with the rifle, not men who have never fired a rifle except at a target or ever expect to shoot otherwise, and who therefore take no interest in rifle shooting except in seeing who can make the closest group of shots on a stationary target and to win spoons and cups.

The makers of targets on the Continent employ good animal painters to make the shooting as like the real thing as possible.

I know of a range where you climb steep rocks amongst bracken, and as you get near the top, you see a model of a chamois, life-size and colour above you, half hidden in foliage, which you shoot at.

At another range, there are stags, roe deer, wild boar, even hares, life-size and colour which rush past unexpectedly like clay pigeons in an English shotgun shooting school.

"Figure" targets in the United States and England are very badly drawn (the running deer at Wimbledon was an exception, being drawn by Sir Edwin Landseer).

The "figure" targets one sees in England and in the United States are drawn by artists of the cubist, futurist, and vorticist schools. Such

drawings, over which the art critics go into ecstasies, are too difficult to identify and therefore not suitable for quick rifle shooting practice.

The shooter does not know when it is safe to shoot. What he thinks is meant for a wild boar, or possibly a lynx, is really meant to be the "portrait of Miss X., the beautiful Musical Comedy Actress," put up as a target owing to the mistake of a workman ignorant of art.

It will be noticed that the bull's-eye and concentric rings for scoring bear no relation to the object drawn on it. It is possible to miss what looks like a bottle stopper and score a bull's-eye, or to hit the bottle stopper and score a miss.

I have shown a proof of this last paragraph to a friend who says he understands cubism, and he tells me the target referred to represents a soldier and is a very fine example by one of the founders of cubism and it ought to be purchased for the Chantry Bequest, but I am not sure if my friend is a reliable art critic.

I confess I do not understand art criticism as I am merely a sculptor who exhibits at the London Royal Academy and Paris.

CHAPTER XXXI

DANGER OF LEAVING PISTOLS ABOUT

THE brainless have one perennial joke. This is to take up a firearm, aim it at someone, say "I'll shoot you," and then pull the trigger.

Even an unloaded pistol should never be left about. Someone is sure to "snap" it and ruin the lock, lugging at the hammer and pulling at the trigger at the same time, just as people rip out the teeth of the gear of an automobile by altering gear without first taking out the clutch.

If the pistol is loaded, someone is sure to get shot by a fool. Both the owner who left the loaded pistol about and the man who fired it "not knowing it was loaded" are equally to blame.

Aiming firearms in "fun" at people is not empty-headedness solely but a form of hysteria.

It is done by the same people who laugh when at a funeral, or commence to rock a boat in "fun" and cause so many drowning accidents.

The best thing that can happen to such people is for them to "clean a pistol not knowing it was loaded" and shoot themselves.

There is a story of a man who wished to kill a

monkey. When he noticed the monkey was looking at him, he took an empty gun, pointed it at his own head, and pulled the trigger. This he repeated many times, propping the butt of the heel plate against a tree and the muzzle against his forehead.

Then the man loaded the gun, put it to full cock, and laid it on the ground and went off.

As soon as he was out of sight, the monkey crept up to the gun and repeated what he had seen the man do.

Result—monkey's head blown off.

This is the exact mentality of the "did not know it was loaded" fool.

The only difference is that, as soon as such people kill others on the "did not know it was loaded" principle, there are plenty of others to take their place.

As they are always acquitted when they say they "did not know it was loaded," others imitate, knowing there is no danger of their being hung for this murder.

But if you shoot another man, even if you think he is going to murder you, unless you have let him first have a shot at you, you run the risk of being hung for it; if he turns to run away you must not shoot him in the back as he runs away or you get hung for it.

Parents encourage children in the criminal folly, aiming at people; they give them toy pistols and play themselves with the children pretending to be frightened when the child comes round

the corner and fires the popgun or pistol with paper detonator at them.

When this child grows up, he always thinks that to point a firearm at any one and pull the trigger is "humour" and takes the first opportunity to pick up a firearm and point it at people. "Want of the sense of humour" is the unpardonable sin in the opinion of so-called "Humorous writers," who consider any one not laughing at their obvious drivel is wanting in a sense of humour, and if he abuses mothers-in-law or throws bricks at a starving cat, he considers himself a humorist.

Surely any one pointing a firearm at others in play should be punished by two years' hard labour. This would soon teach people that they must curb their "sense of humour."

There are plenty of other "jokes" left such as pulling a chair from under any one about to sit down, or putting tin tacks in his boots; but of course they have the disadvantage of not actually killing him, and you may be prosecuted for damages, but the joke of shooting a man on the "did not know it was loaded" principle entails no unpleasant consequences on the shooter. He is always acquitted even as when a defendant said "I only pulled the trigger to frighten her, having forgotten to unload my rifle when I left the trenches in France to come back to England." Imagine a soldier not unloading and cleaning his rifle when coming out of the trenches, but leaving it to rust during his leave home in England!!!

CHAPTER XXXII

USING ONE'S BRAINS IN SHOOTING

PISTOL shooting is not merely the mechanical art most people think it is, a man who does not use his brains and think out things will go on making the same mistakes all his life and never improve or become a good shot.

There is no such thing as luck. A bad shot means a fault somewhere, and the good shot is he who can diagnose the cause of this fault and correct it.

I saw a most ridiculous instance of a man not using his brains.

A man was practising next me at Gastinne-Renette's. He shot some two hundred shots, beautifully grouped but all to the left.

I asked a friend if he had noticed this. He answered that he had seen this man shooting constantly, that he was a regular attendant and had been for years.

He always put his shots to the same side of the target, and had never discovered that if he only aimed a little to the right, he would hit the target.

I saw a man counting stamps at an hotel. He

was wetting his finger to turn them over and got the whole lot into one sticky mass.

This latter man was perhaps so used to counting paper money by wetting his finger that he was doing it mechanically with these stamps whilst thinking of something else.

The former man looked an intelligent man and was so most probably in his business, but he cannot ever have used his brains in pistol shooting.

I put a man right once who was shooting at a black "man" figure in competition.

He shot very badly. I asked him what was the matter. Unlike most men who tell you to mind your own business, and make you chary of helping any one, this man asked me if I could assist him.

He said he could not see his front sight on the target and feared something was wrong with his eyes.

I showed him it was not his eyes but the black front sight of his pistol on the black target which was at fault.

I put a big blob of chinese white on his front sight squeezed from a water colour tube.

He won first prize with a highest possible score.

Like the conventional man with his doctor who has cured him, he never even thanked me.

Getting into bad habits in shooting has constantly to be guarded against.

A horse is very apt to get carrying his head crooked, tongue lolling, hitching, etc., unless he is

constantly corrected. So must a shooter watch and correct his own faults.

It is as well to get a good shot to watch you shooting occasionally and to point out to you undesirable tricks or habits you may be getting into, without noticing it.

Some men, when shotgun shooting, gradually get into the habit of carrying the muzzle too low so that they sweep others as they walk. This is the result of shooting much alone, and so getting out of the habit of noticing when they are swinging their guns across others.

CHAPTER XXXIII

THE PERFECT TARGET

Most targets are very imperfect, not only from the bull's-eye being a wrong size, but the scoring on them is very rudimentary, and does not show the real value of the hits. For instance, take the usual English five hundred yards' target.

If a few hundred men have fired at these, there are a quantity of highest possible scores made which have to be shot off and much time wasted thereby.

Seven lucky shots just touching the extreme edge of the bull's-eye counts a highest possible. A score consisting of six shots into the very centre of the bull's-eye and one shot just grazing the edge of the bull's-eye counts one point less than the former, though a much better score.

No target except the one I am about to describe enables one to know if a bullet has hit the absolute centre of the target. In other targets you have a bull's-eye more or less small, and any shot in the absolute centre counts no better than one on the edge of the bull's-eye.

A perfect target should fulfil the following conditions:

Bull's-eye right size for aiming at.

Possibility of judging an absolutely central shot.

Certainty and ease with which the scoring value of a shot can be ascertained.

Such a target exists and is illustrated herewith (see Plate 8).

It is the target in use at Gastinne-Renette's Pistol Gallery, Paris, and is the invention, I believe, of the Founder of the firm, the grandfather of the present proprietor.

A perfectly placed bullet is one in the absolute centre of the bull's-eye.

Apart from the impossibility of aiming at it, the mathematical "point" would be of no use as a bull's eye. If the bullet hits it, or hits a pin's point (which is the smallest practical substitute for the mathematical point), the point disappears and there is no means of telling if the centre of the bullet struck that point or not.

M. Gastinne-Renette's solution of this problem is extremely simple. It is to make the bull's-eye of *exactly the diameter of the bullet fired at it.*

If a bullet hits a bull's-eye which is exactly of the same diameter as itself, and no part of the bull's-eye remains visible at an edge of the bullet hole, then that bullet has hit absolutely central in the bull's-eye.

The next difficulty was that such a small bull's-eye is difficult to aim at with a pistol.

This was overcome by enclosing this absolute

bull's-eye called the carton, in a larger bull's-eye, called the aiming bull's-eye.

The carton is left white and the aiming bull's-eye printed black.

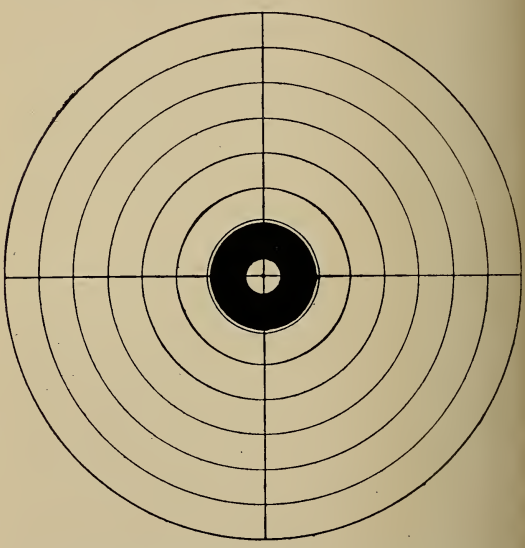


PLATE 8. THE GASTINNE-RENETTE 16 METRES TARGET
This target has a $1\frac{3}{16}$ black. The ring is to facilitate judging

This aiming bull's-eye is of the diameter of three bullet widths.

The target in question was designed for the .44 bullet. The carton is therefore .44 of an inch

diameter, the black bull's-eye 1.32 in diameter leaving a ring of black round the carton of exactly a bullet width, *i.e.*, .44.

The reason for having the black bull's-eye three bullet diameters in width is because this leaves a space of exactly one bullet width between the edge of the white carton and the outer edge of the black bull's-eye.

This gives a black ring, a bullet width, surrounding the bullet diameter carton.

Therefore when a bullet strikes the black of the bull's-eye it can do one of three things.

It can cut partly into the white of the carton, it can cut partly into the white of the target outside the black bull's-eye, or cut the black without touching the white on either side of it.

To decide if the carton is cut into (which would score one point higher than if the black of the bull's-eye only was cut) examine first the edge of the bullet hole nearest the carton.

If this is uncertain, examine the opposite edge of the bullet hole, next to the white of the rest of the target.

If this is cut, then you know the carton cannot be cut, as the bullet hole is the exact width of the black.

To make assurance doubly sure, there is a thin line on the target, just clear of the outer black of the bull's-eye.

If the bullet hole touches this thin line, then it is an absolute certainty that it cannot *also* cut into the carton.

The rest of the target is divided into concentric rings exactly the width of a bullet hole.

The same bullet hole therefore cannot cut into two rings, and if it is doubtful that a certain ring is cut into, the opposite side of the bullet hole is examined, and if it cuts into the ring on that side, then the first ring cannot have been cut into.

The whole idea is merely having no divisions of the target either further apart or closer than the exact width of a bullet.

Then, given a target of thin, good cardboard, in which a bullet makes a clean cut hole, scoring is an absolutely simple and accurate matter.

From the above long, but necessary, explanation it will be seen that the Gastinne-Renette target fulfils all that a perfect target should.

The highest possible score which can be made on it is absolute perfection, and as such is not attainable either by man or the pistol (even if it is shot from a vise) the target never can "get beaten" as is the case in any other target.

The man who can make a highest possible on the Gastinne-Renette target, even when shooting at a range of one yard, does not and cannot ever exist. The target is made on the .44 calibre measurements because the .44 bullet is the standard for pistol and revolver at the Gastinne-Renette Gallery in competing for the Grand Medaille d' Or but this system can be applied to any size bore, for pistol or rifle or even cannon. I do not know if it was patented, but if so, the patent must have run out years ago.

CHAPTER XXXIV

IS DUELLING WRONG?

RIGHT and wrong are not, as some suppose, clearly defined, as are black and white. Right and wrong so overlap that it is difficult, except for a clergyman, to decide which is which. Circumstances may turn the balance, and what is right under some circumstances is very wrong under others.

A man may pose as being very good, whereas he is merely a coward; he may refuse to fight, not because he thinks it wrong to kill, but because he is too cowardly.

Wrong often poses as right.

Right and wrong are chiefly a matter of convention, and vary with different races of men, and at different periods.

What is wrong to-day may be right to-morrow. The list of right and wrong I give below, is only made up to date, and is subject to revision at any time.

Probably by the time this book sees the light, this list may be entirely out-of-date.

In early times holy men did things which would

land them in prison if they were alive in these days.

In the cruel ages when men knew no better, St. Francis of Assisi preached (like Buddha) kindness to every living thing, and called the birds "our little brothers."

In the present superior age, St. Francis would spend his life in prison from inability to pay the fines imposed on him for feeding birds.

Kindness to animals was never a popular virtue. It is considered "soppy," "sickly sentimentality."

Men have always liked to bully horses to show what good riders they are, and what "control" they have over them. They think it draws forth admiration to be seen knocking a horse about. It shows their mental superiority over a mere brute.

Small men like to be seen lugging a big good-natured dog along by a chain, threatening him with a whip. It shows their great brain power over mere matter.

The feeding of starving birds in a hard winter and kindness to cats has always been merely tolerated, even before it became a crime to do so.

In the year 1917, in London, a poor old woman went off crying bitterly, unable to pay the fine imposed on her for giving a few crumbs out of her own scanty meal to some birds. But even in less enlightened times, in the days when birds were pitied, such doubtful conduct was not much approved of except in the case of old maids or

little girls. The former were also allowed to keep cats and parrots. Such kindness was "too mawkish" for men and boys to stoop to. Boys should only stoop to pick up stones to throw at birds and cats. "*Boys* will be boys" and it is a pity to spoil their spirit.

Such boys are in their element now.

A great wave has arisen against mawkish sentimentality. Formerly societies were formed to enforce close seasons for birds and animals, to give them a chance to live in peace during the breeding season, and to prevent the extinction of fast vanishing species, and the Clergy instructed their parishioners in kindness to animals and the "mawkish" protection of defenceless rodents during the breeding season.

But this is changed in the present superior age.

Rabbits and hares can now be killed all the year round. A doe rabbit, dying in a snare or steel trap with a broken leg held by sharp steel teeth, lies suckling her young which have come to her, and the young die of starvation when she has died in torture.

Committees are formed in villages, the Vicar as chairman, which give prizes to the boys who destroy the most birds' nests and kill the parent birds and their young. Little girls are given prizes for killing the most butterflies.

Those children who are too young yet to be able to kill birds are not forgotten. They are given prizes, which they take home to their proud

parents, for the greatest number of flies they can kill.

When I was a boy, in the cruel bad times, I was told I would go to a very unpleasant place when I died if I was so wicked and cruel as to kill flies or pull their wings and legs off whilst they were alive.

I understand this game of pulling wings and legs off is also now played by boys with young birds taken out of nests.

How otherwise can two boys fairly divide a nestful of young birds if they are of an uneven number?

I was at a village fête where such prizes were given and I expressed surprise that a boy did not get first prize for a very big heap of dead flies. I was told that he had collected the dead flies found on the window ledges the previous autumn, and added them to his heap of kills, so he was not eligible.

It is praiseworthy to kill flies, but wrong to collect those already dead.

I must apologize for this long digression, but it was necessary in order that my following analysis of what is conventionally right and wrong might be properly understood.

As right and wrong at present stand, a man in uniform, if he meets a man in a different uniform (a man, with whom he has no quarrel, and of whose existence he was ignorant up to that moment), and he is told to fight that man, and kills him, he becomes a *hero*. The more he kills, the greater hero he is.

If on the other hand, this man in uniform quarrels with a man in the *same* uniform as himself, or who is in civilian dress, or if he is himself in civilian dress, and if, as the result of this quarrel they fight (even if a fair fight, with friends of each man present to see that it is a fair fight) and he kills the man, then he is a *murderer*.

A murderer must be murdered; that is his punishment for murdering a man.

It might be imagined that if the man who murders another has to be murdered himself by another man, who thus also becomes a murderer, it would end by everyone being killed except the last man.

This is not so. When a civilian has murdered another in fair fight, the man appointed to murder this murderer does not become a murderer, he is an executioner, and is paid for murdering the other man, and the incident closes.

Whatever wrong a man receives from another, he must not fight him. He must not even slap his face. That is an assault and wrong.

He must accept a sum of money considered equivalent to the wrong done him.

Some men are not satisfied with this. They consider receiving money from their opponent a degradation, and even the suggestion of such a course, an insult.

In countries where duelling is still allowed, they have a solution—the duel.

CHAPTER XXXV

REMARKS ON DUELLING

THE mere word duel raises a smile amongst the empty headed. Hardly any one thinks for himself; he takes his thoughts ready made, like his tea when he gets up in the morning.

He opens his paper; in the paper he reads "So-and-so is the wickedest man on earth," good; in future, whenever he hears of anything So-and-so's done, it is wrong; and if he sees So-and-so "on the pictures," he hisses with all his might.

Next, he reads that "such a one is the best and cleverest man on earth," this is enough. "Such a one" can do no wrong, and if he sees "Such a one" on the cinematograph screen, he stamps and shouts with delight.

In prehistoric times someone wrote a joke in arrow-head characters about duelling; as comic subjects are scarce and have to be used over and over again, duelling became a standard "joke," and therefore the sort of people I have mentioned grin the moment they hear the word, as they roar with laughter when they see a "comic" actor.

It always amuses me when an actor who is a "comedian" attempts a serious part.

As he walks in with a despairing air, the audience shriek with laughter (because he is labelled as "comic" in their brains). The actor says in a pathetic way "my wife went out starving to beg for bread, and she found the child had fallen in the fire, and was burnt to death when she returned at length with food."

The audience simply roll with laughter, and gasp "is he not killing?"

I merely make this digression to show how difficult it is to make people think for themselves, especially on the subject of duelling.

Duelling is a "comic subject" to them, and that is the end of it.

Just as war is necessary, so is duelling necessary. Duelling is to the individual, what war is to the nation.

The man who laughs at the word duel would not laugh if he were standing before another's pistol, and knew that within a second of the word "fire," he would have a bullet in his breast and be dead.

He does not differentiate between the "advertisement duels" which sometimes take place on the Continent, where neither combatant intends to shoot the other, but merely wants to get his name in the papers, and a real duel by which a wronged man seeks redress.

In a sword duel a man, if young and active, can avoid being fatally injured. He can keep all but his right wrist and knee out of danger, and as soon

as he gets a scratch on them, give up the fight on the plea of being "at a disadvantage."

But with pistols it is different, provided the seconds have not (in order to prevent a fatal termination) altered the sights or reduced the powder charge. In fact, if he has an accurate and properly loaded pistol in his hands, a good shot can make certain of hitting his opponent.

When such a one misses his man or hits him in a non-vital part, it is because he has done so purposely, not wanting to kill the man.

Sometimes a man who feels he is in the wrong, stands up to be shot at, and either misses his opponent on purpose, or does not shoot at all.

On a recent occasion, when a duellist had not fired when the word was given, someone had the bad taste to ask him why he did not shoot. The answer was "I forgot."

This was the occasion for a stream of jokes; the writers of these jokes did not of course appreciate the chivalry of not shooting, and the delicacy of the reply. They made all sorts of silly remarks about "absentmindedness," only exposing their own empty-headedness thereby.

Having now cleared the ground, I will in the next chapter give details of how a pistol duel is conducted, and how to train for it.

In countries where duelling is allowed, the upper classes know how to fence, and to shoot the duelling pistol; they need no teaching if called out. Any one who has learnt to shoot from instructions

given in this book needs no further teaching. He only needs to be told the rules. There are, however, a few points in which duelling differs from the rapid-fire practice I have given, one being the position the pistol is raised from, and when it is permissible to raise it.

CHAPTER XXXVI

REMARKS ON DUELLING (*Continued*)

THE person considering himself aggrieved sends two of his friends as his seconds, to see his adversary. The latter if he accepts the challenge appoints two of his friends to act as his seconds.

These four seconds meet and agree as to the conditions of the duel. If the matter is serious, the duel is fought till one of the combatants is either killed, or is so seriously injured that he cannot continue.

Otherwise the seconds take the first opportunity to declare that their man is unable to continue, owing to his injury having placed him at a disadvantage. This means, practically that first blood drawn ends the combat.

If the provocation is a very grave one, the challenger tells his seconds they must insist on the combat continuing to the end.

The seconds should be taken into the challenger's confidence, and he should tell them exactly what he really wants. He cannot interfere after they and the adversary's seconds have arranged the terms, and he may find himself bound by his

seconds to something quite different from what he had intended.

He may be let into a fight to a finish over some trivial nonsense, and have to kill a man he does

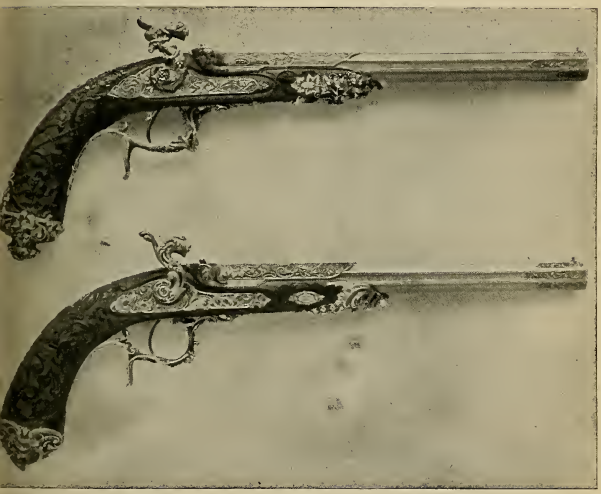


PLATE 9. ORNAMENTAL DUELLING PISTOLS BY GASTINNE-RENETTE
The property of the Author

not want to kill, in order to save his own skin. Or, wishing to kill a man who has done him an unforgivable wrong, the duel may end with a flick of cloth cut out of his sleeve and his enemy unscathed.

Combatants are not allowed to use their own weapons. The pistols of the regulation pattern (muzzle-loaders shooting a regulation load of smokeless powder and round lead bullet, see Plate 9) are provided by a gunmaker, are loaded by the gunmaker in the presence of the seconds, and sealed up in their case. The seals are only broken and the pistols apportioned by lot to the combatants when on the duelling ground, by the director of the duel chosen by the seconds.

In Paris you are absolutely safe as to your pistols. M. Gastinne-Renette generally supplies the pistols, but in an out of the way place where you do not know the gunmaker, and do not trust your opponent or his seconds, it is advisable to instruct your seconds to be very careful what gunmaker is chosen, and if they are the least bit dubious to insist on M. Gastinne-Renette being telegraphed to, asking him to send a representative with pistols.

A doctor has to be present at the duel.

Lots are drawn by the seconds for position. It is very important to have at least one good practical shooting man as second or your seconds may give away advantages to your opponent's seconds, and place you facing the sun.

The distance is twenty-five metres (26 yards 1 foot 2 inches). The opponents stand facing each other and holding the pistol with the butt *touching their right thighs*.

The director of the duel, after giving the cau-

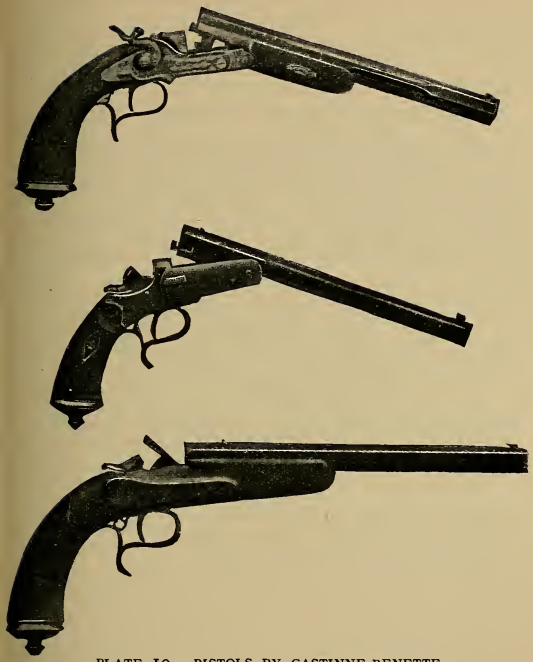


PLATE 10. PISTOLS BY GASTINNE-RENETTE

1. Shooting Smith & Wesson, .44 cartridge. 2. Modified Ira Paine to shoot .44 or .22 ammunition. 3. Saloon pistol, .22 bore, weighing and balancing like a duelling pistol ;

tion *attention*, says "*feu, un, deux, trois.*" After the word "*feu*" the pistol may be raised and fired, but not fired later than the word "*trois.*"

To lift the pistol from touching the thigh *before*

the word "*feu*" or to fire after the word "*trois,*" is a very grave offence, and if your opponent is killed, it is murder.

The seconds draw up a "Proces Verbal" or report, of the proceedings, which they and the doctor sign, and this is at once submitted to the police. If there is any irregularity reported in it, such as lifting the arm too soon or shooting too late, it is a very serious matter indeed to the guilty one.

If a duellist is killed, his adversary must stand by the body till the police arrive, and deliver himself up to them.

If all is in order, he will probably get off, or at the worst get two years' imprisonment.

If he has infringed the regulations —— ??

CHAPTER XXXVII

DETAILS AS TO DUELLING

THE following remarks on duelling apply only to countries where duelling is permitted.

In duelling the challenged has the right to choose what weapons are to be used, pistols or swords.

The pistol is the weapon for any one deeply wronged, provided he is anything of a pistol shot.

In a sword duel the duellist can parry; in a pistol one, he cannot parry, but he can shoot first. If his adversary is a good shot and intends to kill him, his best chance is to hit him before he can fire. A man who knows he is in the wrong and also knows he has a man in front of him, determined to kill him, is very apt to shoot too hurriedly and wildly.

Suppose A. who is a good pistol shot and an indifferent fencer, wishes to fight a duel to the death with B., who is a good swordsman but a bad pistol shot.

It would be very bad policy for A. to send a challenge to B. It would be equally bad policy

for B. even if he does not want to fight, to refuse A.'s challenge, if he knows A. wants to kill him.

The reason A. makes a mistake in challenging is that B. when challenged, can choose swords as the weapons, which gives him the advantage.

If B. does not want to fight, having nothing to gain by killing A. and objecting to have A. try and kill him, refusing to fight avails him nothing. It puts him in a worse position. A. has merely to take the opportunity when B. is in a public place to insult B. and compel B. to challenge him else B. is publicly branded as a coward. A. now being the challenged can select weapons and chooses pistols, thus signing B.'s death-warrant.

The most important thing of all in a pistol duel, is *not to lift the pistol before the word "feu."*

There is very little danger of shooting too late, each wishing to hit the other first prevents that, but there is a very serious risk of lifting the pistol *before the word "feu."*

The best way to avoid this risk is to be determined, at whatever cost, *never* to lift too soon either in practice or competition, so that in case of having to fight a duel there is no risk of lifting too soon; it should become so mechanical to wait an appreciable interval before lifting the pistol after the word "*feu*," that there can be no shadow of a doubt that the pistol has not been lifted too soon.

It is an unpardonable fault to get into the habit of lifting the pistol too soon in competition.

The best way to cure this fault if acquired (the

most difficult of all faults to eradicate, it being one of nerves) is to lift *just before the word "un,"* not after the word "*feu,*" and get into the habit of treating the word "*feu*" as you do *attention*, as just an order to get prepared to lift, not as the order to lift.

In time you will entirely lose all desire to lift at the word "*feu.*" You may be a shade slower in your shots, but this is counterbalanced by the absence of the dread of being too soon.

A man who has been several times disqualified in competition for being too soon, may get very slow in lifting and wild in his shooting, as his whole attention is fixed on the words of command instead of on doing good shooting.

Some men adapt a slightly forward lean in shooting, like pigeon shots or a runner on the mark. I do not think there is any advantage in this as there is no recoil to stand up against in a duelling pistol as in a pigeon gun.

The objection to this position is that it does not give the appearance of absolute ease and confidence, so necessary in duelling. It looks like anxiety.

Now half the battle, as any one who has boxed knows, is to "get a healthy funk" in his adversary before the fight begins.

If you draw yourself up slowly to your full height, plant your feet firmly and look your opponent well over, it will have much more effect on his nerves, than if you stand in an eager excited attitude.

Carpentier has this gift to perfection, better than any other fighter I have seen. He has such an air of perfect reliance in himself and confidence and contempt for his adversary, that the latter seemed almost to quail before him.

When the pistol is handed to you, you are not allowed to test the trigger-pull, but you can make a shrewd guess of its strength as you cock it, if you lift the hammer high and let it drop clean back into the bend.

A heavy trigger-pull gives a much louder click in cocking than a light one. I bought Ira Paine's hair trigger Smith & Wesson revolver, which he used for his dangerous feats on the stage, and I hardly hear any sound in cocking it,—the trigger-pull is so light.

Byron, speaking of duelling, in *Don Juan*, says:

> It has a strange quick jar upon the ear,
> That cocking of a pistol, when you know
> A moment more will bring the sights to bear
> Upon your person, twelve yards off or so;
> A gentlemanly distance, not too near
> If you have got a former friend or foe;
> But after being fired at once or twice,
> The ear becomes more Irish, and less nice.
>
> Canto IV.: Stanza XLI.

CHAPTER XXXVIII

OUGHT DUELLING TO BE ABOLISHED?

It is a mistake to think that it is to the universal satisfaction that duelling is no longer allowed in England.

Probably it was abolished, owing to some agitation by a few cranks, like that against stag-hunting and Sunday amusements, and even at the time of the abolition, there were many who thought duelling was a necessity and its abolition a mistake.

Even a judge of the present time doubts if his abolition was not a mistake.

On May 17, 1911, it is reported that at the dinner of the Union Society of London, Lord Justice Vaughan Williams said:

In recent years a statement that man is a liar does not bear the weight it used to do.

There were times when if one man called another a liar, that man was called to account for it, it might be even in a duel. But long since duels came to an end.

If a man called an Englishman a liar in a public place, that Englishman had a habit of knocking that man down; I am afraid that habit is dying out.

He said he was sorry he had come to that conclusion, that the "world in general, as it was accepted in England was coming to think that it did not matter very much if one's neighbour called one a liar or not.

"One would smile, meet him in society, go out and play golf with him, and shake hands with him.

"He wished people would resent more this imputation of being liars."

"Vanoc" in the *Referee* newspaper said:

For some reasons the abolition of duelling is a mistake. Insolent and offensive language is now too frequently indulged in with impunity . . . the best rule of all is never to take liberties yourself, and never to allow liberties to be taken with you, and to remember that self-defence is still the noble art.

Over the signature of "Les Armes de Combat," a writer after referring to "the deplorable" inefficiency of the mass of English officers with the revolver, says:

The reason Englishmen take no interest (as a nation) in pistol shooting, whereas pistol shooting is of national interest in countries where pistol duelling still exists, is because in those countries every man of the upper classes, soldier or civilian, has at the back of his mind the possibility that he may be called out.

Amongst this class therefore, fencing and pistol shooting is a national sport, with a spice of utility behind it. In Great Britain this incentive has ceased to exist.

Whilst duelling is allowed in one country and not in another, it puts an inhabitant of the latter country in a very unenviable position if he is insulted in the other country.

He cannot shield himself behind the plea that duelling is not customary in his own country, without laying himself open to be called a coward, and yet he must not fight.

At the actual time I was writing the above, an English officer was having to submit to the indignity of being tried for murder under circumstances in which, in a duelling country, he would have had a perfect right to kill the man.

As I sat down to resume writing this morning, the morning papers were brought in. I picked up the nearest, which happened to be the *Daily Mirror*, and the first words my eyes fell on were:

With the verdict of "not guilty" the great love drama trial came to an end at the Old Bailey yesterday. Scarcely had the foreman of the jury uttered the words which set Lieut. X—— free, than frantic cheers rose in Court, and were taken up by the enormous crowd, which, seething with excitement, awaited the result in the street outside.

Can any one doubt what answer this crowd would have given, if asked if duelling should be made legal in England?

How the law at present stands, for citizens of the United States of America and for British sub-

jects, will be found in the supplement of this book (reprinted from my *Art of Revolver Shooting*).

The American law does not apply to the case of a duel fought by a citizen of the United States outside the geographical limits of that country.

According to Mr. R. Newton Crane *no offence is committed* by the fact that an American citizen has participated in a duel beyond the jurisdiction of the United States. The citizenship of the combatant, is in such circumstances, immaterial.

On the other hand, sending, knowingly bearing, or accepting a challenge in England or America, renders the sender, bearer, or accepter, liable to punishment by the laws of England or America, as the case may be, whether the duel is subsequently fought or not, and whether it is fought in England or America or abroad, and whether the offending party is an Englishman, American, or a foreigner. Provoking a man to send a challenge is also an indictable offence.

The law applicable to the punishment for actually fighting the duel, is, on the other hand, the law of the place where the duel is fought, and that law only, applies to the offence.

Provocation, however great, is no excuse, although it might weigh with the court in fixing the punishment.

Under the English law the punishment for sending, bearing or accepting a challenge is fine or imprisonment without hard labour, or both.

Each of the States of the United States has

penalties for the offence, which though differing in detail are practically the same in substance as those provided by the law of England.

It seems, therefore, that a citizen of the United States of America, can safely fight a duel in a country where duelling is permitted with a man of any nationality, provided he does not challenge, accept a challenge, or fight him on American *or* British soil.

CHAPTER XXXIX

HOW TO PREPARE A NOVICE IN HALF AN HOUR FOR A DUEL

A DUEL takes place only a few hours after the challenge, generally early next morning, to prevent interruption.

Suppose a man has never had a pistol in his hand. How should he be trained in the half-hour at his disposal?

This is easy—if he is experienced with the shotgun at game or clay pigeons.

Show him the hind sight of the pistol; tell him it is merely to assist him in aligning the pistol.

Tell him that as there is only one barrel, it would be difficult to align it without this sight, pointing out to him that his double barrel shotgun can be aligned without this aid as in that case he looks along the rib.

Tell him to imagine he is using a shotgun, and to use his pistol exactly as he would use his gun if shooting at a rabbit which sat up on its hind legs for a moment, to listen.

Tell him he must be careful to keep the butt end of his pistol against his thigh, till he hears

the word "*un*," and that he must not fire after the word "*trois*"; in fact, he must not fire a poking shot.

On no account, unless he unfortunately knows it already, let him know the pistol may be raised after the word "*feu.*"

If he is a good snap shot with a gun, he is sure to shoot quickly enough.

Show him that keeping his arm straight corresponds to keeping the left arm well out in shotgun shooting.

Tell him that "*attention, feu!*" will first be said by the master of the duel, just as "Are you ready? pull!" are said in pigeon shooting, but that it will be a "no bird" if he lifts his pistol before the word "*un*," or if he fires after "*trois*," his adversary being considered "out of bounds" at the word "*trois.*"

Load the pistol and hand it to him, and tell him to cock it.

See that he is standing with the butt properly against his thigh.

Say "*attention, feu!*"—with a good interval apart, then sharply "*un, deux, trois.*"

He is almost certain to hit the figure, and well before the word "*trois.*"

Say, "I knew you would find it very easy," and take him away at once: *do not on any account* let him have *another* shot.

This one successful shot is all that is necessary, even for an expert duellist before a duel.

If your pupil should miss, explain to him his fault, and chaff him as to his inability to hit a "sitter." Above all do not let him get to aiming.

If he hits next shot, his lesson is finished.

In the very improbable event of his again missing, then you will have to continue your instruction as for one of the below class of pupil.

It is of vital importance to give him absolute confidence in his ability to hit his man.

He should on no account be allowed to see others pistol shooting.

The most difficult pupil to instruct in half an hour is the man who is an expert pistol shot at a stationary target, but who has never attempted to shoot rapid-firing or at a moving target.

If he has besides never used a shotgun, his is almost a hopeless case.

He is certain not to raise his pistol before the word "*feu*," but it must be drummed into him that if he cannot let off his pistol before the word "*trois*" *he must not shoot at all*, or he will be hung for murder.

Then the half hour can be spent in trying to get him to squeeze and let off in time, but probably the only result will be terribly wild shots, and he will finish with a feeling of despair as to his ability to hit his opponent.

I think it is best with such men not to let them have any practice but merely to tell them that they must keep the butt of their pistol to their

thigh, till the word "*feu*" and that they will be hung if they fire after the word "*trois.*".

In the actual duel, they will either miss or, what is more likely, lift the pistol well up to the sky, begin slowly to lower it, and that will be all, as they will not have fired before the word "*trois*" is spoken.

They will be fortunate if they do not let off involuntarily after the word "*trois,*" but if they are of the sort who keep their finger outside the trigger guard till they have had a ten seconds' aim, there will be no danger of that.

I have just been reading a book in which the hero "aimed for well over thirty seconds before firing straight at the light"; he must have had an arm of steel to be able to fire "straight at" it after aiming for over thirty seconds.

Another type of pupil is one who has shot both shotgun and rifle, but both on entirely different principles.

He is a splendid man with a shotgun, quick as lightning in snap-shooting, or a "tall" bird coming down wind.

He scorns to take advantage of a cantering hare, or a low bird. But the moment he has a pistol or rifle in his hands, he alters his method entirely.

Unless he is an officer who has had "field firing" practice, and a few rounds out of a revolver, he has only shot a rifle at a stationary bull's-eye target, or at a stationary stag in Scotland, and all his shooting has been done in the prone position.

There is a convention in Scotland that a rifle shall not be fired at a deer unless the deer is absolutely stationary. A man shooting driven deer or deer galloping is according to this convention "not quite a sportsman," though he may be a deadly shot at galloping deer.

It is called "not quite cricket." That is not a happy simile; Cricketers do not, I am told, hit at a ball whilst it is stationary, but when at full speed.

"Not quite golf" seems to me more appropriate; in golf the poor little ball is treacherously hit whilst sitting on its little nest, basely built for it by the very hand that strikes it.

A man who is a crack shot with the gun, and who unfortunately is also a crack shot with the rifle in its restricted conventional sense, at slow deliberate aim, can perhaps be prepared for a duel by impressing on him to forget all he knows about rifle-shooting, and to imagine he is using a shotgun, but the moment he sees the back sight of his pistol in the actual duel, he will try to use it for deliberate aim and miss. The habit of a lifetime cannot be altered in half an hour.

The shotgun man who has never fired a rifle, has no need to be told not to "poke."

Dwelling on the aim must be entirely drummed out of the target rifle shot, and he must be again reminded just before he shoots in his duel.

The "shotgun man" on the contrary has to be told—"Don't pay any attention to the director of the duel, if he tells you you can fire after the word

'*feu.*' You fire after the word '*un*'; you do not need all day to hit a sitter; show them what snap-shooting is."

It is hopeless to try to instruct in half an hour for a duel the utter novice, the man who has never had firearms in his hands. He is either of those who are frightened at firearms; are sure "it will explode" when "examined," or "when you do not know if it is loaded," or is of the type who is "not the least afraid" of it. He cocks it pointing at you, turns to speak to you whilst familiarly poking you with the muzzle to emphasize the joke. He is of the type that rides at a five barred gate with spikes on top of it.

It is the courage of ignorance, to use the polite term, but to put it bluntly—it is because he is "a d—d fool."

All that can be done with such men is to try to prevent their shooting the seconds or themselves, and "losing off" at unexpected and inopportune moments.

They may even in an excess of caution "fire into the air."

People are very fond of doing this in crowded neighbourhoods "merely to frighten a man," and are very much surprised when someone gets hit.

CHAPTER XL

PISTOLS FOR SELF-DEFENCE

THESE can be divided into two classes.

Pistols to be carried on the person and pistols to be kept by the bedside against attacks at night.

The pistols to be carried on the person can again be subdivided into pistols carried openly, and those carried concealed.

For a pistol carried openly, the big army pistols are the best, my choice being the U. S. .45 Army Colt Automatic (see Plates 13 and 14).

Such pistols, it must be remembered, have great penetration, and if fired in a room the bullet can go through a closed door or a thick partition, as if they did not exist.

Hiding behind a door or closing and locking the door is no protection against a bullet from an automatic pistol, even the very smallest calibres having great penetration.

The only way in which closing a door *may* protect those on the other side is that the one shooting cannot actually aim at them.

As very few men can hit what they aim at with a pistol, this is not much advantage. In fact, the

person shot at by a bad shot is safer than those at the sides. It is difficult to hit what is desired but something else is sure to be hit however badly the pistol is aimed.

A pistol intended to be carried concealed is more difficult to decide on than one to be kept by the bed.

Take the latter first.

The main object of a bedside pistol is to frighten the intruder, without having to shoot, the next most important point is, if it has to be fired, that no innocent person in another room should be hit.

For the first reason, to frighten the intruder, the pistol should be as big and formidable looking as possible. A big double-barrelled, pistol-shooting dust shot would probably answer best, and need not be loaded; its looks are enough.

It is more formidable than the largest automatic. It can be fired without aim; even in darkness it is almost sure to hit what it is intended to owing to its spread of shot.

If No. 8 or less size shot is used and a light charge of powder, it would not go through a door or partition.

It must be remembered that such a charge is very deadly at close range, more so than a bullet even, so should be fired only as a last resource, also it is of no use to fire at one of two people struggling together, it will hit them both.

For a burglar escaping, if care is taken to let him get well away, say thirty yards, before firing,

it would mark him for identification. It is a very ticklish job to shoot at a man running away, as far as the law is concerned, and had better be avoided.

The other alternative for a bedside pistol is a .44 Smith and Wesson Russian model with gallery ammunition, and in the hands of a good shot this is the best of all, as he need not shoot to kill unless necessary. They are now no longer made, but can still be picked up occasionally.

Now as to a pocket pistol to be carried unobtrusively. It must be borne in mind that if any one is shot with a pistol the shooter may get into more trouble, and get less sympathy, than if he carried a pistol openly.

One sees advertisements giving illustrations of vest pocket automatic pistols of minute size, particular stress being laid on their small size.

This is not the most important feature to be desired in pocket pistols.

A smoker does not complain of the size of his cigarette case, therefore a pocket pistol need not be smaller than a cigarette case.

Even these smallest automatic pistols are *thicker* than a cigarette case and it is thickness which bulges out pockets, not superficial size.

As a rule, a very small automatic pistol means very small bore; small bore means inefficiency.

A pocket pistol of all pistols must have instant stopping power, as the shooting is done at a few feet or even inches off.

A pistol which does not instantly render the

assailant harmless is worse than useless. It makes the assailant angry and desperate; he also knows that now if he kills his man he can claim self-defence, having been shot at first.

Very few wish to kill their man. He can be held off with a pistol which commands respect, but a little toy is only laughed at.

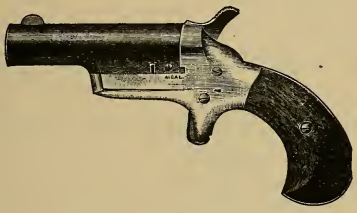


PLATE II. COLT DERRINGER
.41 calibre, rim fire

These modern small size automatic pistols are built on a mistaken idea that they are the modern prototype of the old Derringer pistol, which was the most deadly pistol in existence, and the weapon used most frequently in old-time saloon shooting quarrels.

The Derringer was a vest pocket pistol smaller and more compact than most vest pocket automatic pistols, but it was not a small bore pistol. (See Plate II).

It was just the essential parts of a big powerful pistol, shooting a big powerful cartridge.

The want it fulfilled was a pistol having great power in a small compass; one shot was all that

was required, as the shot was fired at very close range.

Some Derringers had a second barrel below the other, but the typical Derringer was a one shot pistol.

Now if you take a big single shot pistol, how would you reduce it in size to fit the waistcoat pocket?

First you would cut off the barrel except the actual chamber in which the cartridge lies.

Then you would take off as much of the hammer as is compatible with leaving enough grip for the thumb in cocking.

Then you would whittle away all the stock till only the lock mechanism remained; and this was practically what the Derringer was.

This could be still further improved upon by making it "hammerless"; that is with an internal hammer.

The Derringer was a rim-shot fire cartridge. My pistol would shoot a central fire shot.

For those who desire to be able to shoot several shots rapidly and who do not care to carry two Derringers, an automatic pistol built on the Derringer principle might suit them.

The difficulty is that the reciprocating mechanism takes up room. It is attempted to overcome this by making the pistol shaped like a hammer, the stock coming at right angles out from under the middle of the barrel, but this is awkward to hold, and to shoot.

One good shot, well directed, is worth a whole pistol full of shots blazed away.

This is not the popular opinion, for, as long as a constant fire is kept up, and plenty of smoke and noise, people think great things are being done. It is only after all is over and there is no result that they begin to wonder what it was all about.

PLATE 12. COLT AUTOMATIC PISTOL .25

Capacity of magazine, 6 shots. Length of barrel, 2 inches. Finish, full blued, with case-hardened trigger, slide lock safety and grip safety, or full nickel plated; rubber stocks. Weight, 13 ounces. Length over all, 4½ inches. Cartridge, cal. .25, rimless; smokeless; metal patched bullet.

The typical *Air Raid* newspaper report says, "He fired at least three tray loads of cartridges, the stream of smoke could be distinctly noticed"; and the reporter is in ecstasies, and the unimportant detail that all this "losing off" resulted in nothing does not occur to him.

It is the noise, not the results of shooting, that impresses and frightens people.

If noiseless firearms were invented nobody would pay the least attention to an air raid except the people actually struck.

A woman was taken to an asylum a raving lunatic after an air raid. She was near some anti-aircraft guns which had been firing, no bombs were dropped near where she was. It was the mere noise of firing that frightened her.

It is the noise that frightens game; I have shot one bird after another out of a covey of black game on the ground. The rest did not fly off at the shots because I was hidden and was using a ".22 short" rifle and the noise of a waterfall drowned reports.

If I had fired a shotgun at one, the rest of the covey would have been off at once.

For actual protection in a house at night without endangering any one, a big pistol loaded with blank ammunition (black powder so as to make plenty of smoke and a little "red fire" powder added to make plenty of flash) would drive off almost any burglar.

I think this is the best house protection for a houseful of women to have by their beds at night. The only thing is to avoid burning peoples eyes or setting things on fire when "losing off."

"A stern chaser" of coarse salt is a good man stopper without being fatal and the pain makes the victim think he is mortally wounded.

CHAPTER XLI

DRESS

THE dress one can wear when pistol shooting is limited to what the company present is wearing at the time.

The ideal dress on a warm day would be that of a rowing man with the addition of a sombrero and nailed shoes, but of course this is inadmissible.

The absolute essentials are to have the right arm, shoulder, and neck free, and a firm grip of the ground with the feet.

A soft front shirt is not so necessary in pistol shooting as in rifle or shotgun shooting.

With the two latter the stock does not get properly imbedded into the shoulder when wearing a stiff shirt, but in pistol shooting as long as the neck and right shoulder are not interfered with, a stiff shirt does not hamper.

Moderately tight clothes, if the right shoulder is free (sleeves cut well out underneath), help to keep the body rigid.

An overcoat is inadvisable. The sleeve not only hampers the movement of the right arm but its weight on the outstretched arm is a great handicap.

An Inverness cape, even if thrown or buttoned back, is also inadmissible; it hampers the right shoulder.

As having the body rather tightly buttoned up is an advantage, a tight fitting frock coat is permissible. It is better buttoned than open as otherwise the skirts are in the way.

A lamb's wool vest, or a second waistcoat may be worn when shooting out-of-doors in cold weather. I prefer a thin leather Swedish sleeveless waistcoat under my coat instead of the usual waistcoat.

In wearing the leather waistcoat it need not show. The coat can be buttoned over it.

There is a shooting coat, I believe the invention of the late Mr. Cholmondely Pennell, which has a waistcoat of thick material to wear over, instead of under, a thin coat. This keeps the body warm whilst the arms are light and free.

Boots or shoes with corrugated rubber soles or nailed boots should be worn if the ground is heavy, wet, or slippery.

As nailed or rubber soled boots cannot be worn when in formal dress it is best to make sure of your foothold when wearing ordinary boots or shoes. The heel can be stamped into the ground a few times to get a firm stand or the soles rubbed on gritty sand.

Out-of-doors it is best to wear a hat, as one can see much better when the eyes are shaded. Have a hat that holds well on your head.

Do not wear the hats made of hard straw with low crowns and narrow brims. They fly off at the least provocation and the mere fact of your hat feeling like a partridge who is on tiptoes about to take wing will upset you and spoil your shooting.

I took a man who had never been to a shooting range before to see the finish for the King's Prize at Bisley.

There was a puffy breeze blowing up the range.

He was wearing one of these hard flat straw hats with his college ribbon on it.

I told him he had better be careful that his hat did not blow off and interfere with the shooting.

We stood behind the two men who had tied for the Gold Medal, and were shooting off the tie.

He had just begun to say "my hat never blows off,"—when his hat soared off his head like a clay pigeon out of a trap, and landed just in front of the man who was aiming. My companion was a "hat worshipper," one to whom his hat is everything. They hold it on when on a runaway horse. If it blows off they will dive under a train in motion after it, or do things to save their hat which would gain them the Victoria Cross in battle.

He at once started to jump over the prone shooter after the hat, but I held him back. All interest in the match was gone, he had eyes only to watch his hat.

I finally got him a little calmer by explaining that though the shooters were most probably

wishing the hat in a place where straw would soon kindle, they would not shoot through his hat (I am not talking thus, only slightly exaggerating).

Men who worship their hats do not like trotters because they splash them.

There was one of the rare winters in England when one could get a few days' sleigh driving.

A man had long worried me to let him take some photographs of my trotters in a sleigh. I telegraphed him to come at once and I would take him out in a sleigh and he could take snow photos.

I met him at the station with a pair of trotters, both able to trot below 2:18, hitched to a light two-man cutter sleigh.

He was delighted, got tucked in beside me with his camera and said he would take one or two photos of the horses from where he sat.

I told him not to begin before we got clear of the town, on to the big open straight road.

Now some men will go out in a cranky boat, or rush a motor car round a corner through a crowd of children without a tremor, but are frightened to death of a trotter, especially a keen one who takes hold.

Now my mares had often raced against each other and when together as a pair had racing in their minds.

They were fresh, the day cold, there had been a thaw and then a frost; the road was just right and the horses shod with new steel spikes, sharp as chisels.

I let them step along, the snow came back in a shower of balls on us, varied by a sharp sliver of ice, which cut like a knife. The horses and I were enjoying ourselves, and then I remembered my companion.

I called out "Take them now," as the mares were squaring away racing against each other.

I only heard, "Wow—Oh" as each snowball hit him. Fortunately he was holding on to his "sacred" hat with one hand and to the side of the sleigh with the other, so he had no hand to spare to snatch a rein to upset the sleigh, he was only able to groan, "Stop, Stop!"

He scrambled out and took the photos from the safety of the side of the road, and said he preferred to walk back to the station, and the last I saw of him was with his camera in one hand holding on his sacred (in the French meaning of the word) hat with the other.

CHAPTER XLII

SELF-DEFENCE

If a man is found in the house at night, he can be generally captured by getting the drop on him, that is to say, getting an aim on him before he aims at you, and make him hold up his hands.

But there are cases when, in order to save another or yourself, to attempt this is merely to get killed.

If a man is rushing on you it is no use calling "hands up." Shoot instead of talking.

This especially applies to a man rushing on with a knife. He most probably will throw it into you if you are not quick.

With an automatic pistol there is little in a room to hide behind which gives protection and it only gives the opponent courage and time to take a deliberate shot through the obstacle, if you try to shelter yourself. If he tries to take shelter behind something impenetrable, if you fire into what he is sheltered behind it often brings him out and enables you to get a shot at him.

If he is behind a small tree the big bullet of a .45 Army Automatic would probably go through

and hit him and, even if it did not go through, it would frighten him so that he would show himself and give you the opportunity to shoot him.

A big-game shooter knows of many dodges to induce a dangerous animal who has hidden, to show himself, or charge.

Calling to an imaginary person behind the attacker as "Look out Tom, he's coming your way, shoot," will perhaps make a man, expecting an attack from his rear, expose himself to you in front. Throwing something towards him may make him move. The great thing is to keep him moving and prevent his shooting back.

If attacked by several men at the same time, take a fresh one for every shot, hit or miss, and then you can begin to take only those not already hit.

This is the only way to keep the lot off and prevent being attacked by the rest while you are fighting one.

Get your back against a wall or something if possible so that they can only get at you from in front.

Taking a fresh one for each shot is my experience in big-game shooting when you come on a lot which are all shootable.

If you pick out one and he does not drop to your shot and you pump several more shots into him till he does drop, you may find afterwards that you have wasted shots on an already dying animal, and let others within range escape.

As an instance of doing everything wrong and

being praised for it, the following quotation from a daily paper is hard to beat.

The writer of the article evidently approves greatly of a woman firing at random into the darkness when she hears a suspicious noise.

Even if the noise was made by burglars outside, she was just in the best position in the lighted window, to get killed. An innocent man might plead he was shooting her in self-defence.

A pleasant neighbourhood to live in when a woman shoots at random into the night when she hears a noise!

Below is the article in question omitting names. The passers-by as well as the lady must have had an "exciting experience."

SHOTS IN THE DARK

Lady's Midnight Encounter with Burglars

Mrs. X. had an exciting experience just after midnight on Saturday. She was in her bedroom, which is on a level with the lawn, when she heard noises in the shrubbery.

As she thought that men were there she procured a revolver, and, standing in the lighted window, called out, "If you do not leave I'll shoot." There was no answer, so she fired, and there was a scurrying of feet to another clump of trees. Again she called out and as there was no reply she fired a second and a third time, and then the figures of several men were seen running off as fast as they could.

And no wonder!

CHAPTER XLIII

PROTECTING THE EYES AND EARS

THERE is no direct danger to the eyes in pistol shooting, that is to say, with a good pistol there is no chance of a blow back of fire into the eyes, as there is in a cheap, rim fire rifle. The eyes are apt, however, to get bloodshot and sore from powder smoke blown back into them in a head wind, especially from the ejecting cartridge of an automatic pistol.

When doing much shooting daily out-of-doors it is well to wear a pair of big diameter spectacles fitting well behind the ears so that they do not shift. The spectacles may be of plain white glass, or else of a colour to suit the state of the sunlight.

Blue or grey used to be the usual colours; lately yellow-green seems to be the colour most recommended by oculists.

I found such yellow-green glasses a great relief to the eyes when bear shooting in the glare of sunlight on snow.

I am referring to men who have normal eyesight, not to those who have already to wear glasses *to correct vision.*

It is important to protect the ears, perhaps even more important than the eyes. There is very little danger to the eyes but the ears are in very real danger when shooting.

Even the comparatively slight noise when shooting the gallery .44 ammunition or the short rifle .22, from constant pounding on the same note, affects the ears unless they are protected.

A concert pianist, one would think, by the noise he makes on the piano, would injure his ears even more than a pistol shot does, as the noise he makes is much louder.

Perhaps he does injure his ears and that is the reason he has to pound so hard and breaks the piano strings in his efforts to hear his own music.

Be that as it may, playing a variety of notes saves his ears as he does not have the constant hit on the one note and with the same intensity.

The ear is the least known of the various organs and is the one least successfully treated.

The usual medical man has the following treatment:

Pour warm oil into the ear, then wash out with warm water (a very successful way to introduce hurtful microbes into the ear).

When this fails the Eustachian tubes are blown out with a "Politzer Bag."

When this also fails some have a little instrument which buzzes like a bumble bee or sings like a mosquito which the patient has to listen to.

If even this treatment fails then the patient is bowed out as incurable.

Prevention is better than non-cure, so protect your ears when shooting.

A pistol is unlikely to burst the ear drum unless fired with a full charge in a small room or close to the ear, but pistol-fire seems to have a worse effect on the ears than the louder report from a rifle or shotgun, owing probably to the shortness of the pistol barrel bringing the discharge nearer to the ear.

The worst of all for the ears is when a man shoots past another's head from close behind.

Gout or catarrh aggravates this evil and a man who never shoots may get "hard of hearing" and have constant singing in his ears from these diseases alone.

There is the later stage of attacks of vertigo when the semicircular canals are involved. Few aurists are successful in curing this.

There is only one ear protector which I have found of any use and I have tried all that have come out.

It is called the Elliott Ear Protector and is made by J. A. R. Elliott, Box 201, New York City, U. S. A.

Savory & Moore of 143 New Bond Street, London and Gieve, Mathews & Seagrove, Portsmouth, England have them in stock.

Most other ear protectors act on the wrong principle and are painful to wear and they bring on giddiness.

To stuff the ears with cotton wool makes the pressure of air on the outside of the drum differ from the air coming through the Eustachian tube if this latter is blocked more or less by catarrh (as it is in nine out of ten persons, especially smokers or residents in damp climates). This inequality is increased and harm is done to the ear.

When a cold is supposed to be cured, it often is not but has gone from the early, through the acute, and on to the chronic stage. It then lies dormant, to wake up every time a fresh cold is caught, and then takes a deeper hold in the outer, middle, and inner ear. Often what is put down to gun deafness is really chronic catarrh and gout. People who have never fired a shot suffer from gun deafness and noises in the head.

As soon as a cold has ceased "to run" people think it is cured. They neglect to drive it entirely out of the system and it lies smouldering to take the earliest opportunity to flare up again, like a banked-up fire.

Some recommend wool mixture with modelling wax forced into the outer ear.

This not only has the defects of plain cotton wool but it is a compound impossible to fully take out again. The modelling composition sticks and remains in all the crevices of the ear and if forced repeatedly in dislocates the outer ear passage.

I use modelling wax for sculpture, and it is impossible to clean it out of the nails even with

manicure instruments. It has to be dissolved with turpentine and peroxide which would ruin ears if used for them.

The Elliott Ear Protector acts on an entirely different principle and it reduces the noise of a heavy express rifle to a mere thump, like striking the fist on a wooden table. It takes all the sting out of the shot.

A man who was a gunner at the front during the war tells me that his ears are quite right owing to his having used the Elliott Ear Protectors, whereas a man standing next to him had an ear drum burst after a few shots.

The principle of this protector is to let the sound strike the side of the tube of the outer ear, instead of directly on the ear drum. The protector closes the ear tube so that only a very minute, hair-like passage remains, through which a whisper can come, but any big volume of sound is checked, like a crowd trying to push through a narrow door and allowed only to dribble in one at a time.

Even the small amount of sound which does get through is impinged on to the sides of the outer ear passage. None reaches the drum of the ear direct, but indirectly by the action of a rubber diaphragm.

The result is arrived at as follows:

A short celluloid rod has a hair thin hole running down it, but not quite reaching the far end. It enters a hole of the same size running across the tube.

There is a soft India rubber disc at each end of the rod, the transverse hole being between the two discs.

In use this rod is inserted into the ear till the uppermost disc just closes the passage into the external ear, and the lower disc cuts off access to the ear drum.

Any sound reaching the ear can therefore only pass down this hair thin passage in the rod and into the space between these two rubber diaphragms.

The sound cannot reach the ear drum. It passes through the transverse hole into the space between the two discs.

No sound reaches the ear directly. It only hears the vibration of the inner rubber diaphragm and the diaphragm receives only a very minute part of the original sound which reaches the ear.

The minute hole in the rod allows of the entry and escape of the outer air. Thus each side of the ear drum receives an equal pressure of the external atmosphere.

When very heavy gunfire has to be withstood, care must be taken that the outer disc fits airtight into the tube of the ear. A little vaseline or other antiseptic ointment round the edge of this disc makes an airtight joint, or a third rubber disc is added, but the two discs are ample for pistol shooting.

The ear protector is easily kept clean and antiseptic by washing occasionally in a weak antiseptic solution.

There is no inconvenience in wearing these ear protectors and they are not very noticeable.

With some other forms of protectors, made of hard vulcanite which are forced in to make an airtight closure, pain and soreness arise if they are worn for any length of time and this unyielding vulcanite may displace the anvil and bones of the middle ear, or a sore may be caused and set up grave inflammation. Any ear plug which requires forcing or stretching the ear passage is dangerous or painful to wear.

CHAPTER XLIV

EYESIGHT

THE back sight of a revolver is held further from the eye, as compared with a rifle back sight, and the object to be hit is under fifty yards' distance. The eyes best suited for pistol shooting therefore are those of moderately long sight, the normal eye in fact.

A near-sighted man, without glasses, has difficulty in seeing the back sight although the range, twenty to fifty yards, would suit his eyes better than rifle shooting at long ranges of eight hundred and one thousand yards.

If a near-sighted man wears glasses the difficulty of seeing equally well at varying distances comes in.

Men who have worn glasses all their lives cannot be made to realize that they cannot adjust their focus.

They, unfortunately, have never experienced the blessing of being able to see a thing close and at a distance with equal distinctness.

Most of them can read without glasses, in fact they take off their glasses if they want to examine

anything minutely which they hold in their hands.

For seeing anything further off they wear glasses (but glasses are only a compromise). The glasses are made to enable them to see objects clearly across the street, or to see a motor car before it runs them down.

Anything further is more or less blurred, the further it is the more blurred it looks.

If their glasses were correct for one thousand yards they would butt their heads into everything at fifteen yards off.

It is always best when driving to treat any one wearing glasses very carefully, to remember he can only see in front of him; sideways of his direct vision he may be as blind as a bat or a horse with blinkers on.

It is on account of this that so many people wearing glasses are run over.

When in addition to this they cross a road holding an umbrella well before their glasses, it is best to stop the horse and wait till they are across.

This adjusting of a glass for a fixed distance can be seen with deer-stalking telescopes and Zeiss glasses.

When spying for a deer one makes a mark on the draw tube to suit one's usual spying distance, which is about one thousand yards.

One can see deer clearly with this adjustment from the one thousand back to about three hundred yards, but for a closer view you have to readjust the focus.

If with the focus correct for the one thousand yards you attempt to look at an object only as far off as your back sight or even your front sight, you will see only an indistinct blur.

A near-sighted man, shooting a pistol full arm stretch, without his glasses, sees his back sight a blur and his front probably not at all, and the target like a post impressionist picture.

If he puts on glasses to see his hind sight properly, his front sight will not be distinct, and the target still more indistinct.

I think for a near-sighted man it is best to have glasses made so that he can see his front sight very clearly.

Then he would see the man target at twenty-five meters quite well enough to be able to hit it. It is not necessary for him to see his back sight distinctly.

A good pistol-shot does not focus his eyes on his back sight. That comes in line by itself when he gets into the mechanical lift of his arm.

As I have already mentioned a long-sighted man can continue pistol shooting without wearing glasses after he needs them for reading. But a long-sighted man is apt, when he finds he begins to see the hind sight of his rifle not as clearly as formerly, to use glasses. Then he has all the insurmountable imperfections of a glass which cannot accommodate itself to varying distances like the eye can.

Instead of wearing glasses all he needs to do is

to shift his hind sight forward on the barrel till he can see it distinctly.

The long-sighted pistol-shot does not have this difficulty. He holds his pistol so far from the eye that the back sight is right for his long sight.

It is a most extraordinary thing that men who have such bad eyesight that they have to wear very strong glasses and even then blink and are half-blind in the sunlight, can shoot very well in those dark coal cellar shooting galleries.

A clerk who, when writing, puts his nose right down on the paper, holding his head on one side, in fact a man semi-blind and suffering with extreme myopia made extraordinary good scores with a miniature rifle in a coal cellar shooting gallery, at a minute stationary bull's-eye.

A cellar in which a normal-eyed man would not be able to shoot or to see his sights!

He is longing to get to the open air ranges with a full charge rifle, but I discourage him all I can as I know he will be painfully disillusioned of his skill in rifle shooting

It is the abnormal conditions of a coal cellar gallery which suits his abnormal vision. A normal sighted person would only blind himself by trying to imitate him.

CHAPTER XLV

THE WEATHER AND SHOOTING

RAIN, as far as the actual shooting goes, does no harm to shooting. In fact, if your adversary has to wear glasses it gives you a great advantage over him as his glasses get covered with a film of water.

A dull drizzle is often accompanied by a dead calm and better shooting light, than a sunshiny day.

Wind is the great enemy to pistol shooting.

In rifle shooting, in the prone position, the wind not only lends interest to the shooting, but brings out the best shot, the one who can calculate how to aim to compensate for the wind's action on his bullet.

The pistol-shot, on the other hand has to stand against the wind and hold his pistol with one hand and wrestle with the wind which blows his arm about.

It is not a question of calculating how much of the bull's-eye you must aim at to compensate for the force of the wind from the side; but it is a matter of mere physical strength to try and hold the pistol steady whilst being buffeted by the wind.

It is as if you were trying to draw a straight line whilst someone twitches at your sleeve.

No amount of practice will make you able to draw a straight line or shoot a pistol under such circumstances. It only discourages you and wastes time and ammunition. It gets you into timing and letting off wrong. If in a shooting competition there is a wind and you are shooting at deliberate aiming, then wait for lulls between gusts, and snap shoot during the lull.

If you are doing shooting "Au Commandmant," or rapid-firing, you have to take the wind as it comes.

Bringing up with a very stiff arm, rapidly, is the best defence against your arm being blown about.

In England all open air pistol ranges have the firing points unprotected. From a financial point of view this is a mistake. It is better to spend money on making the range usable in all weathers. Otherwise it is often deserted as nobody cares to shoot in a high wind.

From the point of view of health it is not wise to shoot in the rain as there is no walking about to make the blood circulate.

If you keep moving and get into a perspiration and keep so all the time and take a hot bath and a change of clothing directly you get home, rain will not hurt you.

Getting chilled after perspiring, or sitting about having afternoon tea by a hot fire before changing your damp things, does the mischief. Even if

there has been no rain it is much better to change your things at once and have afternoon tea afterwards. If you get wet and cannot change your things on the spot it is much better to walk home fast than drive home and feel cold all the way.

I broke through ice in intense frost when wild boar shooting at Couvain, Ardennes Belges, and got my boots full of icy cold water (long boots over the knee). I walked four miles to the lodge and felt all in a glow the whole way, took a hot bath, had dinner in bed, and felt none the worse for it.

The others being dry drove home, but if I had done so, I should most likely have had a dangerous illness.

It is a very great mistake, when overtaken in summer by a thunder shower, to take shelter when you are in a perspiration; you will get chilled for a certainty.

Walk home fast, even if you get wet to the skin in so doing. Keep on walking, or if you are on a horse, keep on trotting and cantering alternately, till you get home.

If your horse is tired after a hard day's hunting and it is a cold wet evening, keep him moving for his own sake as well as your own.

I had ridden fifty miles during the day (a run with stag hounds which had taken me twenty-seven miles from home). The mare was getting leg weary, so I unwisely stopped at an inn, six

miles from home, and put her in the stable to give her warm gruel with beer in it.

When I started half an hour later to lead her home she was unable to move. I had to leave her for the night at the inn and after making her as comfortable as possible and rubbing her legs with brandy I walked home by myself.

If I had taken her straight home without stopping to gruel her she would have reached home all right, and had her gruel there and laid down comfortably.

Keep moving when cold and wet, take a hot bath and change the moment you get home. If you feel at all as if you had a chill, go to bed after the bath, put a hot bottle to your feet, pile the eider-down on top of you, drink dried raspberry tea, go to sleep, and perspire. Dried raspberries, a Russian peasant's remedy, are the best sudorific I know. The raspberries are dried and then used just as if they were tea leaves, and the tea thus made drunk very hot, with sugar to taste.

The leather Swedish waistcoat which I mentioned in my chapter on dress should always be worn if there is the least wind when pistol shooting. It can be worn on the hottest day as it keeps the sun out also and as long as one stands still it does not make one perspire, and wind or rain cannot get through.

A thin mackintosh does not hamper much in pistol shooting.

An umbrella is worse than useless against rain

but may be used to keep the sun off. Of course a hat worshipper invariably carries an umbrella.

In rain an umbrella protects only the hat and it drops the water on your shoulders, the worst place you could get wet. People run into others and drip the water onto other people, in fact there ought to be a tax on umbrellas like there is on pistols.

As to snow, I cannot understand any one wanting to hold up an umbrella when it snows. One never sees people do that in a country where snow lies half the year any more than does one see people turn up their collars in really cold countries.

They have their coats fit properly up to the neck, not with lapels turned back exposing the chest.

It always amuses me to see a man with a big fur coat turned far back on the chest so as to show the rabbit skin, dyed to represent sable.

A Russian has his fur "Shuba" double-breasted and buttoned up right under his chin. His deep collar protects his shoulders, but he does not turn up his collar about his ears at the least zephyr of air.

CHAPTER XLVI

MILITARY AUTOMATIC PISTOLS

It is the military use of pistols which has doomed the revolver.

During the war, England was the only country which still retained the revolver as regulation. Every other country had adopted the automatic pistol in its place.

There are two opinions as to the proper calibre for a military pistol. England, having to fight savage tribes, had always preferred a large bore pistol with stopping power. Fanatics who do not value their lives can do a lot of mischief, even if wounded fatally, by a small calibre bullet, before they die.

On the Continent a much smaller calibre is deemed sufficient; a .32 or .38 or a 7 millimetre, whereas England and the United States consider .45 or .455 the best size.

In my opinion the United States .45 Regulation Colt Automatic pistol is the best of all army pistols. (See Plates 13 and 14.) The way it was chosen should guarantee this.

It was first chosen because it passed all the

military tests such as sand, rust, and freedom from jamming under rough usage. Then it was put into the hands of all the best pistol shots in the United States and their reports examined. It has, therefore, not only passed military but expert shooters' tests, and alterations were made in accordance with their reports.

It may seem a great presumption on my part therefore to suggest an improvement, but I have been a big-game shot all my life and used ivory front sights, and I think a black front sight is a mistake.

I am sure a white or silver front sight is the only practical one.

This morning I went out before daylight after deer. It was very misty and I saw a stag eighty yards off, hardly distinguishable in the mist and darkness. My white front sight shone like a star on his shoulder when I took aim and I had no difficulty in taking the shot.

A black front sight would have been so indistinct that I should have missed or rather not fired at all, as I do not like making a mess of a shot and letting an animal go off wounded.

It is self-evident that if you want anything to be as visible as possible you paint it white.

White reflects light better than any colour. If you distribute twenty white, thirty yellow, fifty red, and eighty blue spots over a piece of black paper they look to the eye as being of equal numbers, owing to the blue being so inconspicuous

compared with the red, the red compared with yellow, and the yellow compared with the white.

PLATE 13. UNITED STATES ARMY REGULATION .45 COLT AUTOMATIC PISTOL

Capacity of magazine, 7 shots. Length of barrel, 5 inches only. Length over all, 8½ inches. Weight, 39 ounces. Finish, full blued, checked walnut stocks.

Cartridges. Calibre .45 U. S. Government, 230 grain bullet. Calibre .45 Colt Automatic, 200 grain bullet. (Both rimless; smokeless powder; full jacketed bullet.)

White being the most conspicuous of all it takes fewer spots of white to dominate. As these spots are on a black sheet of paper very few spots of white would draw attention from all the colours.

As ivory is fragile, a big silver or plated bead front sight is better for a military automatic pistol or rifle.

The first thing I did when I got my United States .45 Colt Automatic pistol was to put on it a white silver bead front sight, first removing the regulation black knife edge front sight.

I then made the U in the hind sight very big. This pistol has been carried through the war by my chauffeur, W. Francis, who entered the Russian Army as a volunteer and has gained the St. George's cross for bravery and he is delighted with the sighting of the pistol, and can do very rapid shooting with it.

For practical use of the pistol in war, self-defence, or duelling, what is needed is a strong set of sights which can hardly be injured under the roughest usage; sights which can be seen instantly in a very dim, as well as strong light.

The best sights for such purpose are those which are used on duelling pistols.

It is most extraordinary that all pistol sights except the French duelling ones are so very unsuitable.

The military front sight consists of an upright narrow rod as seen when aiming. This is very thin and high and is black, with the top, when it has been used for any time, polished a dull grey, from use.

The hind sight has a very minute notch in it. The result in aiming is as follows: You faintly see

a very thin black rod with a hazy top against the dark object you are trying to shoot.

By searching for it very carefully you see a microscopic notch in the hind sight, much too small to enclose this rod when aiming.

You cannot keep your elevation in shooting. As soon as you try to take the top of this front sight in your minute notch you lose sight of it altogether.

The rod so blocks the notch that you do not know if you have the front sight centrally in the notch or at one side.

In fact if I was asked to devise a set of sights to prevent a man being able to shoot well, the regulation military sights are what I would choose.

If strong enough the ivory ball would be the ideal colour for a front sight, as it is a dull white, instead of the reflection which sometimes comes from silver highly polished.

What is called "frosted" silver would be a good surface for the silver front sight if it did not tarnish.

The back sight should be just high enough above the barrel to avoid blur when the barrel gets hot, but otherwise the lower it is the better, having a big U-shaped notch large enough to enable the white front sight to be seen in the notch when showing a slight ring of daylight all round it; both sights as low on the barrel and as far apart as possible.

This combination of sights is seen instantly without any searching or eye strain. All you have

to do is to look at the object you want to hit, paying no attention to sights, till your fully-outstretched arm, coming up by sense of direction, points the pistol at the object, and you see before your eyes this silver ball in the middle of the U of the back sight.

Snap-shooting is made more difficult with military sights on a pistol and accounts for many men being blamed for being bad pistol shots, whereas, it is really the fault of the sights. I cannot make good shooting even at a stationary target with such sights and for rapid firing or at moving targets my shooting is much inferior to that with the same pistol, when fitted with duelling sights.

I can understand the English-speaking nations not using duelling sights, as very few ever shoot a duelling pistol, but that the Continental nations, with their knowledge of duelling, have not adopted duelling sights is to me very strange.

The same remark applies to military rifle sights which are such as no big-game shooter would dream of using.

METHOD OF OPERATION

A loaded magazine is placed in the handle, and the slide drawn fully back and released, thus bringing the first cartridge into the chamber, leaving the hammer cocked and the pistol ready for firing.

If it is desired to carry the pistol fully cocked,

the safety lock may be pressed upward, thus positively locking hammer and slide. The safety lock is located within easy reach of the thumb of the hand holding the pistol and may be instantly pressed down when raising the pistol to the firing position.

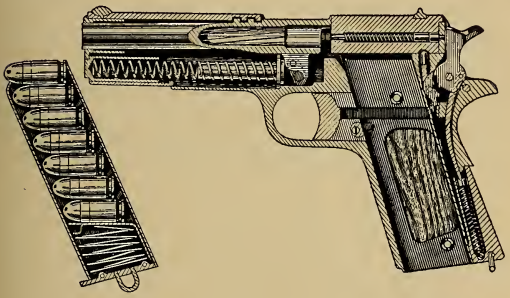


PLATE 14. UNITED STATES ARMY REGULATION .45 COLT AUTOMATIC PISTOL. SECTIONAL VIEW

To lower the cocked hammer, draw it back with the thumb until it forces the grip safety in flush with the frame; at the same time pull the trigger, then lower the hammer with thumb.

SAFETY DEVICES

It is impossible for the firing pin to discharge or even touch the primer, except on receiving the full blow of the hammer.

The pistol is provided with two automatic safety devices:

The automatic disconnector which positively prevents the release of the hammer unless the slide and barrel are in the forward position and safely interlocked; this device also controls the firing and prevents more than one shot from following each pull of the trigger.

The automatic grip safety which at all times locks the trigger unless the handle is firmly grasped and the grip safety pressed in.

The pistol is in addition provided with a safety lock by which the closed slide and the cocked hammer may be at will positively locked in position.

CHAPTER XLVII

RECOIL

When buying a pistol the amount of recoil you are able to stand plays an important part.

This is not entirely a matter of physique.

A slight, wiry man, whose hands and muscles are in hard condition, and who "gives" to the recoil will be able to shoot a pistol having a recoil which would knock all the shooting out of a man who was in a flabby condition, or not accustomed to manual work, even if that man were much heavier and stronger.

Some men can bear punishment better than others.

The duelling pistol has not only no appreciable recoil, but the recoil is distributed by the big stock over the whole of the hand.

The duelling pistol has the longest stock of any pistol and also has no projections to hurt the hand.

The pistol most people would imagine has no recoil is the small .32 pocket revolver and this is the very one whose recoil hurts more than almost any other pistol.

Recoil depends on the proportion between the cartridge charge and the weight of the pistol.

A pistol weighing 2½ lbs. would shoot the .32 cartridge with hardly any appreciable recoil.

But this same cartridge in a small pocket revolver weighing only a few ounces kicks very viciously.

Besides it has a very small stock made the same shape as a full-sized stock.

The result is that, whereas in a full-sized stock the top of the comb is designed to project over the thumb and forefinger, in the little vest-pocket pistol this comb comes against the tender part of the palm and the recoil drives it into the hand.

I have had my hand cut and bleeding after a few rounds with a pistol intended for ladies' use!

The surest way to make a beginner flinch is to let him begin with a little pocket revolver.

I mention revolver because an automatic pocket pistol generally does not have a stock with projections which can drive into the hand by the recoil.

The makers know that if the slide of an automatic pistol *did* drive back into the hand it would do very serious damage. They therefore make the stock so that it cannot be held with the comb against the palm of the hand.

Men accustomed to shoot a pistol having a heavy recoil get so used to bracing against that recoil that they bob forward with an empty pistol to a recoil which does not come.

A heavily loaded gun, if it misses fire, makes the shooter bob forward involuntarily to meet the recoil he expects.

An automatic pistol can be used with a heavier loaded cartridge than would be possible with a revolver.

Not only is some of the recoil taken up in working the mechanism in the former pistol but the recoil is softer.

The recoil of a revolver can be likened to a blow with the fist, whereas the recoil of the automatic pistol is like a hard push with the open hand. The recoil first having to work the mechanism loses its sudden sharp stinging blow.

I find I can shoot a heavily charged military automatic pistol longer than I can a revolver which has much less recoil. There is none of the jar and strain on the wrist in an automatic pistol which a revolver with the English Regulation cartridge gives.

Cocking the revolver by trigger-pull is tiring to the hand, and a very few rounds entirely paralyses the trigger finger for the time being.

It is a very unnatural strain to draw back the weight of the spring to raise the hammer and revolve the chamber with the trigger finger. It tires the finger very soon.

With the automatic pistol there is none of this strain. Therefore a man can fire a hundred shots rapidly with the automatic pistol, when he could not fire twenty-four rounds with a double action

revolver, using the double action, without his trigger finger giving out.

I merely mention this as a matter of interesting ancient history. Revolvers are obsolete, but it is as interesting to understand how they were used as it would be if we knew all such lost details concerning the ancient cross bow, or Bushman's long blow tube.

When one thinks of the unhappy men who were forced in their training to shoot heavy military revolvers with alternate hands working the double action trigger, it is extraordinary more of them did not dislocate their trigger finger or sprain their wrists.

Let any one take one of these relics and work its double action for ten minutes without stopping, and when added to this each shot drives the wrist upwards with great force, he will no longer wonder why men used to shirk "revolver practice."

CHAPTER XLVIII

JUDGING DISTANCE

With the revolver, which was not usually shot at longer range than fifty yards, judging distance was of little importance.

With a full charge .45 revolver, sighted for twenty yards, the drop of the bullet was not more than about 1½ inches at fifty yards.

With gallery ammunition in a .44 revolver the drop was about 4½ inches.

I am speaking from memory, not from actual calculations or measurements.

The duelling pistol, although shooting the same gallery charge, needs slightly less allowance at fifty yards, as there is none of the escape of gas the revolver has at the cylinder.

There was, therefore, no need to judge distance with a revolver but the automatic pistol with its heavy charge shoots as far as the old time rifles did and so needs knowledge of distance judging on occasions.

Owing to the shortness of the barrel it is very difficult to do accurate shooting at long range, but the pistol itself carries and shoots well up to rifle "midrange" (*i. e.*, five hundred yards).

As it is so difficult to shoot at long range with a pistol there is all the more necessity to be able to judge distance so as to avoid another cause of error.

A long range revolver match took place in 1911 in Colorado, but many important details are lacking.

It was gotten up by the Magazine *Outdoor Life* of Colorado.

The conditions were five sighting shots, and then twenty shots to count.

The target was a brown paper profile of a turkey at three hundred yards' range.

This description is very vague, as all reports of shooting by non-experts are; they always leave out vital details and put in a lot of useless matter; it may mean a target of fifteen inches in diameter (if it only included the body of the turkey) or over thirty inches (if it included the whole of the turkey, head, legs, feathers, and tail).

Probably it was the latter size as, if it was only fifteen inches in diameter, that would correspond to an inch bull's-eye at twenty yards, or a 2½-inch one at fifty yards, much too small for revolver shooting.

It is extremely difficult to hit a four-inch bull's-eye for a succession of twenty shots at fifty yards. I have hit it ten times in twelve shots (see page 349), and the much greater difficulty of hitting a corresponding sized target at three hundred yards would make a full score impossible with a revolver.

The winner, name not given, made three hits

for his twenty shots, six men hit it twice in their twenty shots, six hit it once, and six missed every shot.

This is not a very encouraging result of a long range revolver shoot.

Though the automatic pistol would be much more accurate at that distance, still I doubt if any one could get more than eight shots on the turkey in twenty shots at three hundred yards.

To be of any use for comparison the actual diameter of the turkey would have to be ascertained.

Judging distance should be constantly practised, under all conditions of light, by judging when out walking how far off a man is, and then walking up to the spot, counting your steps, to see if you have judged right.

Do not measure distance by yard strides and thus draw attention to your movements and raise doubt as to your sanity.

First measure in private, say one hundred yards, and then walk it with your natural length of step when walking at your usual speed, and see how many of your steps go to one hundred yards.

When you know your number of steps for a hundred yards you can measure distances in ordinary walking and without passers-by noticing what you are doing.

My natural walk is 104 steps to the 100 yards at four miles an hour.

Try, when you think you are fairly accurate, to

judge the distance a man is off also judge how far a small boy is. You will find at first you think him much further off than he is owing to having got into the habit of judging the distance by the height of the man.

When you come back to judging how far off a man is you will underestimate the distance for the same reason.

Mist makes an object appear much further off than it really is; a sheep close by appears as large as a stag one hundred yards off.

Distance is very deceptive and if one is accustomed to judging the distance of an object of a certain size and then has to change to a similar looking object of a different size the difficulty is increased.

When I have been shooting at stags and judging their distance with fair accuracy and then change to roe deer shooting, the roe always seems much further off than the real distance, because a roe at one hundred yards looks the same size as a stag at two hundred yards off.

This difficulty is increased if the objects are mistaken for each other.

Suppose a river with steep banks, fifty yards broad, in a flat meadow, and you stand in clear atmosphere and full sunshine at a spot twenty yards from the nearest bank. From where you stand you cannot see the breadth of the river; the two banks looking like one line on the green of the meadow.

A faded, weatherbeaten, red fire bucket, is standing on the edge of the far bank, and a flower pot on the near bank.

Both objects look identical in size, shape, and colour because of the linear and aërial perspective at these distances, and it is impossible, unless they are studied very carefully with a telescope or field glass, to know which is which and therefore which is the further off. If you are accustomed to judging the distances of flower pots you would think the fire bucket was a flower pot and therefore only twenty yards off instead of seventy.

Be sure you know what the object is when using it as a means of judging distance, it may be something much larger or smaller of a similar appearance.

A pony, when seen through a thick haze, mistaken for a horse would entirely upset your calculations.

The use of being able to judge distances accurately is to enable you to decide how much to aim above a distant object to make up for the distance the bullet drops in going that distance.

The drop of the bullet increases rapidly as the distance increases.

Whilst at short range the drop is so slight that it does not signify except for extremely accurate shooting, the bullet does not drop in similar proportion at further range.

At two hundred it may not drop more than double what it does at one hundred, but the pro-

portion of drop between two hundred and three hundred is still greater and so on; the flight of the bullet describing, not a section of the circumference of a circle, but a parabolic curve.

When shooting at a man standing upright this drop can be ignored up to four hundred yards with the Military Automatic pistol; as long as the aim is taken at the top of the chest it will hit him somewhere.

But if only a man's head shows it may be missed over or under according as the distance is misjudged, too far or too short.

If a puff of dust or a splash of water can be seen where the first bullet strikes it will serve to correct the aim for the next shot.

CHAPTER XLIX

GAME SHOOTING

THE single shot .22 pistol is much used in the United States for small game shooting for the pot, when camping out after big game. It does not make much noise and also has the advantage of being very portable.

Game birds sometimes come close to a camp in the early morning or evening; and a sitting shot for the pot can be got at them without disturbing the ground, when a shotgun would clear all the ground for miles round.

I find a .22 pistol has not enough stopping power to prevent a wounded rabbit getting to ground and consequently lost. A great proportion of rabbits hit with this bullet are lost.

I use a .44 duelling pistol for rabbit stalking when they are sitting outside their holes. If a rabbit is hit by it he very seldom gets into his hole.

The big bullet does not spoil the rabbit as much as might be thought, the bullet being round and solid it only makes a hole of its own size and goes straight through the rabbit.

A .22 hollow pointed bullet makes much more

mess and has the disadvantage often of not stopping the rabbit though it maims it. The duelling pistol would spoil a game bird if hit in the body but it is all right for a head shot.

It makes slightly more noise than a .22 pistol but it is a soft noise and does not travel far.

I think when game for the pot has to be shot that a ".22 short" cartridge out of a rifle with a telescope sight is best.

After all, hitting the bird at forty or fifty yards off with a pistol takes some doing, whereas with a telescopic sighted rifle the shot would be a certainty.

The pistol is very little used for what seems to me to be a very useful function.

When shooting big game there are many occasions when another shot has to be fired at wounded game unable to get away.

Say a wild boar for instance is brought to bay by the first shot.

He cannot be approached with safety to use the knife, he is killing the dogs, he has to be shot again.

Now you do not want to fire your rifle, which makes a boom like a cannon, as that would disturb the rest of the beat.

If you have a pistol which shoots a big .44 calibre ball with a reduced charge of powder you can go close up to the boar and kill him without making much noise.

If a wounded animal gets you down, a pistol which lies close to your hand may save your life,

and if it shoots a heavy charge and is rapidly fired several times into his body, it would stop most animals except an elephant or rhinoceros.

A rifle can be lost in falling or lain on, the length of barrel prevents it being used at close quarters.

The objection to carrying a pistol in big-game shooting is that every possible ounce in weight has to be saved, especially in a hot climate. The pistol is so much extra weight and when climbing amongst rocks it is a great nuisance. To be of any use against dangerous game the pistol must shoot a big bullet.

In the instance of the wild boar, I mentioned a reduced charge but my idea is to carry the two sorts of cartridges and to have the automatic loaded with full charge cartridges, but if game has to be finished which is not endangering your life, I recommend putting in a gallery charge cartridge for this particular finishing shot so as not to make more noise than absolutely necessary, and not to disturb other game which may be near.

An automatic pistol built for a big charge will not function with a reduced charge. Such a charge does not give enough recoil to introduce the next cartridge and an automatic only works properly with the exact load it is designed for. With a reduced charge the automatic pistol, after the shot, remains half open.

If the magazine and also the cartridge which is in the barrel are first taken out, the gallery-load

cartridge can be put in the barrel and fired. Afterwards the loaded magazine can be put back again and the pistol is ready to shoot the heavy charge.

A single-shot .44 gallery ammunition pistol with very short barrel like the old-fashioned Derringer, could be carried without taking up any room or appreciable weight and be used for finishing deer or other non-dangerous game.

The forester who goes with me moufflon shooting carries a 9 Millimetre Mauser Automatic pistol for self-defence against poachers and he shoots small game with it when he comes across it. It is, however, a noisy little pistol.

Do not take a smaller calibre pistol than a .38 for finishing big game. It does not kill them clear.

CHAPTER L

SHOOTING FROM HORSEBACK

THIS needs an entirely different training to shooting when on foot.

It needs knowledge of "Horsemanship" above all else.

Ninety per cent. horsemanship and ten per cent. pistol shooting skill will beat the finest pistol shot if he has only ten per cent. horsemanship to his ninety per cent. shooting skill.

By "horsemanship" I *mean* "horsemanship," not mere skill in sticking on a horse's back.

A man may have ridden all his life and be able to stick on the back of any horse and yet be no "horseman."

Merely keeping one's seat, and "horsemanship" are two entirely different matters.

The "rider" (*i. e.*, sticker-on) turns his horse by pulling a rein. If he wants to go faster he hits his horse or kicks his heels into it, if he wants to stop he pulls with both hands.

If he wants to turn, he pulls his horse's head round and the horse pivots on his fore legs and his hind legs follow in a wider circle.

The "horseman" uses the aids, that is, his left

hand on the reins and the calves of his legs against his horse's sides.

By the pressure of the calf of his leg, feeling the horse's mouth, and the rein against the horse's neck, he can make the horse obey his every wish, because the horse understands, without any tugging, hitting, or forcing.

"Horsemanship" is having the horse under perfect control and obedient to an indication so slight that it is imperceptible to the onlooker.

The "rider" tries to compel the horse by main force to obey him, and the horse, even when it understands and obeys, does it in his own way, not his rider's way.

It is the difference between two perfect dancers moving as one, and a man who has a vague idea of dancing trying to lug round a partner who knows nothing about dancing.

The "horseman" and his horse are one.

The "rider" and his horse are like a policeman taking off an unwilling prisoner who does not know what he is accused of.

In the one case the horse is watchful for every wish of his rider and instantly obeys, in the other the horse is all the time misunderstanding what his rider wants and being punished for his ignorance.

Unfortunately very few Americans or Englishmen know even the rudiments of the "High School."

That is why so few "riders" can play polo, both man and pony must be of one mind and understand

each other and that can only be learned in the "High School," which is "Horsemanship."

The reason foreign officers are so successful in the jumping competitions at the Olympia Horse Show is that they are horsemen in the "High School" and their jumping horses are trained to it also.

Matador, the celebrated Belgian high jumper, can do the Spanish trot like a circus horse.

Ladies riding astride generally know nothing of "horsemanship," but exaggerate the faults of men "riders."

Their stirrup leathers are so short that the heels are drawn back and the toes point downwards. To go faster they hit the horse with their whips or strike their heels into it but immediately back go their legs into the "heel up toe down" position with their feet almost driven through the stirrups.

The legs stop in this position during the whole ride, as if they were stuffed dummy legs.

They only know one use of the legs, that is to grip the saddle so as to keep their seats in it.

The "High School" rider uses his legs for giving the indications to his horse of what he wants it to do, supplemented by the reins, which, by more or less pressure on the mouth and against the horse's neck, indicate the horseman's wishes to the horse.

A "horseman" does not pull at one rein to turn the horse any more than an expert cyclist turns the handle bars when he wants to turn a corner.

The cyclist leans to the side he wants to turn to

and comes round like a pair of compasses do when you lean them over and let the pencil swing round.

If a "horseman" wants to open a gate he does not kick his heels into the horse and thus force him up to the gate and then lean over the horse's neck to try and reach the gate, which the horse is backing from. The "horseman" holding his reins in his left hand, squeezes the horse with the calves of his legs and this makes the horse go forward.

As he gets to the gate the "horseman" puts his left calf further back against the horse's left side, at the same time putting his left hand slightly to the left so that the right rein presses against the horse's neck.

This turns the horse's neck and shoulders to the left whilst the pressure of the left calf against the horse's left side makes him put his right hind quarters to the right. The horse now stands broadside up against the gate and the "horseman" can easily use his right hand on the gate lock, without having to lean over.

When he has taken hold of the gate a slightly greater pressure of his right calf whilst tightening the reins makes the horse's back and quarter turn, and the gate is opened. He eases his horse's mouth, squeezes with both calves, and the horse walks through the open gate whilst the gate closes behind him.

Suppose two equally good pistol shots, one a good "rider" and the other a good "horseman" are in a mounted pistol competition.

They are told to walk their horses past the target and shoot at it one shot out of their automatic pistol as they pass. Both of the horses have not seen the target before and are rather shy of it.

The "rider" having to hold his pistol can use only one hand to his horse and being accustomed all his life to guide his horse by pulling at the reins cannot guide the horse properly with only his left hand.

As the horse comes up to the target he turns his head towards it and his quarters away from it and begins to sidle away, walking all crooked, the rider kicks his heels into him to try and get him up to the target and when he puts out his arm to aim the horse sidles away still more and whips round away from the target spoiling the shot.

After the "rider" has fired he needs both hands to turn the horse and bring it back, and, having the pistol as well as a rein in his right hand, fires one or two more shots, unintentionally.

The "horseman" squeezes his horse by pressure of the calves into his bridle, his horse like the former horse seeing the target tries to turn his head towards it and to sidle away from it.

The "horseman" merely moves his left hand slightly to the left, causing his right rein to press against his horse's neck and thereby turns the horse's fore part straight again; at the same time he puts his left calf back along the horse's side and this puts his hind quarters straight into place.

If the horse tries to resist, the left spur touches him and he gives in.

When the shot is fired the horse is wheeled round to the left by the pressure of the left hand and right calf whilst at the same time the right thumb slips on the safety of the automatic pistol.

If the reader is not a "horseman" and wants to learn pistol shooting from horseback, he and his horse should go through the cavalry course first.

Even when a horse is standing still, he is breathing, so it is difficult to make good shooting with deliberate aim off horseback.

All shooting has to be done with swing and snap shooting. Care must be taken not to shoot too close past a horse's ears; it may be advisable to put on a hood with closed ear covers, so that he does not get the full noise into his ears.

There is not much to teach as to the actual shooting, it is almost entirely horsemanship, finding out which angle suits you best to shoot from, at what speed the horse moves smoothest, etc.

An automatic pistol is safer than a revolver for use on horseback. There is no putting to half-cock but only slipping the safety on or off.

If the horse begins to plunge, slip on the safety at once, in fact at any indication of trouble with the horse put on the safety.

Do not slip off the safety till the instant before firing and slip it on the moment you have fired.

As you cannot shoot blank ammunition out of

an automatic pistol you will have to use a single barrel pistol for teaching a horse to stand fire.

Be very careful not to scorch him or shoot past his eyes as that will make him always apt to flinch.

An underbred horse is better than a blood horse as a rule for shooting off, but when you do get a thoroughbred who will stand fire, as he has more courage, he will stand fire better than any other horse, and his paces are easier, especially the canter and gallop.

A handy polo pony makes a good shooting pony if it stands fire, as it is used to starting, stopping, and turning.

CHAPTER LI

GALLERY AUTOMATIC PISTOLS

RIFLES and pistols though greatly improved in some respects are now progressing too much in one direction.

The inventor's sole idea seems to be to get the most powerful cartridge possible.

They have now reduced the rifle to a small bore with an extremely heavy charge and therefore the rifle has to be made very heavy to be safe from bursting.

This may be very necessary for war but it is a great disadvantage for the many other purposes a rifle is used for.

The new rifle is unsuitable for dangerous game shooting. People think that as such game is shot at very long ranges and that the further off the game is shot the better the sportsman.

I am constantly asked, "When deer stalking, how far off do you shoot a stag?"

They expect the answer to be, "A thousand yards or so."

When I say, "as close as I can possibly get, generally from about fifty to seventy yards, I

never shoot at deer beyond two hundred yards" they form a very low opinion of my skill.

With bears and wild boar seventy yards is a long shot, from ten to forty is the usual distance.

Often these animals are in rapid motion. I stand up to shoot, there is no lying down on the face and aiming for ten minutes.

Modern "improved" rifles are quite unsuited for this.

The long distance they carry is a great drawback and makes them very dangerous to use in a populous country and for the beaters.

Their small calibre does not knock down an animal instantly like a big bullet does. They have too much penetration and are apt to hit two or more animals with the same bullet.

A charging animal a few yards off may do a lot of damage after being hit by a small bore rifle. There have not been fewer, but more, fatal accidents from wounded lions and buffalo in Africa since these small bore, high power, rifles have come into use.

The heavy weight of a double high power rifle is of a prohibitive weight for snap-shooting.

The recoil also is so great that aim cannot be instantaneously taken for the second shot.

In the black powder days sportsmen's requirements were not subordinated to military requirements.

Express rifles were used by deer stalkers in Scotland and the typical U. S. rifle for grizzly bears

was the .44 Winchester repeater which shot a small charge of powder.

For big game shooting accuracy is not needed beyond two hundred yards but a big bullet giving a knock down blow and a rifle capable of firing several shots in succession with great rapidity. Rifle to be light and handy as a shotgun.

Needing a smokeless rifle answering to the above requirements, I first tried gallery ammunition in a .303 rifle, double rifle.

I found the weight of the rifle was too great and the calibre too small.

I then tried a .400 double rifle, lightened very much and shooting a small charge of smokeless powder, I got the weight down to that of a double 12-bore pigeon gun.

Then I discovered there was danger of getting a full charge cartridge into the rifle by mistake and bursting it. The difficulty was solved by having a special chamber and a straight cartridge of large calibre, and small powder charge of cordite. No high power cartridge can be got into the chamber of this rifle, as they are all bottlenecked so there is no danger of shooting the wrong ammunition. This double rifle is light and handy, very accurate up to one hundred yards and all it hits it knocks down like Thor's hammer.

Unfortunately, the automatic pistol also has been "improved" on modern rifle lines.

The utmost possible power has been put into the cartridge and the pistol has to be heavy and

clumsy to stand this and it has a big recoil and a terribly loud report.

As it is, at the first shot, all within hearing scuttle underground like rabbits, under the impression that an air raid is on.

A full charge automatic pistol is such a nuisance in a pistol gallery, owing to its deafening noise, that nobody cares to use one there, and if he did, he would very soon be asked by the other shooters to desist.

Inventors vie with each other as to who can produce an automatic pistol having the most powerful cartridge, just as rifle inventors do.

What is wanted is not a more powerful automatic pistol, the present ones are far too powerful, but a weak power, large bore one with an extremely light charge corresponding to the duelling pistol, that is to say, one shooting a round bullet of .44 calibre with a very small charge of smokeless powder.

Such a pistol would be an ideal weapon for shooting galleries and would popularize pistol practice, *then* pistol shooting would be a pleasure instead of a penance, when shooting has to be done indoors.

The automatic pistol inventors should experiment as follows:

The external lines should follow the Gastinne-Renette duelling pistol as nearly as possible.

The calibre and cartridge the same as it is (*i. e.*, .44), the bullet being of lead, and spherical.

The magazine of a size to *take only this cartridge*, as otherwise, if a heavy charge cartridge were introduced by mistake and fired, it would smash and perhaps burst the pistol. An automatic pistol made for the light charge would have too weak a recoil spring to withstand a heavy charge.

The duelling pistol cartridge has the bullet seated far down it, and there is a lot of spare useless length in the cartridge.

In the automatic pistol I am advising to be made (the Winans model), the cartridge should be, though of .44 calibre, very short, the round bullet crimped in the end of it, like the .22 bulleted cap cartridges.

The cartridge being so short and the magazine made to fit, the usual high power cartridges would be too long to go into it by mistake.

The sights should be those of the duelling pistol.

I think such an automatic pistol would be much superior to any existing automatic pistol except for military purposes.

As there would be no danger of putting in a higher power cartridge the pistol could be lightened and balance better, all the weight possible being taken off the barrel and fore end, the barrel fluted, etc., so that the balance would be even better than in a duelling pistol, owing to its shorter barrel.

It may be found that the barrel could be lengthened, so as to be longer between the sights, without spoiling the balance.

As the gallery charge is so light, the recoil would be all expended in operating the mechanism—there would be no recoil left against the hand.

Most of the difficulties in designing automatic firearms are having to withstand the enormous pressure of modern cartridges. If you go back to a light pressure in the cartridge, all these difficulties vanish and all parts can be made light.

Such a pistol ought easily to beat all existing rapid-fire revolver records, as good scores as those under duelling conditions should be made, in fact I think better scores, as there is no necessity to raise the hand after the first shot.

With a Winchester .22 automatic rifle I can put the ten shots in three seconds into a two-inch bull at twenty yards, the only time spent is in getting the aim for the first shot, the other shots can be put in as fast as the trigger can be pressed, as there is no recoil, and therefore no time spent in getting a fresh aim for each shot. The .22 Colt long barrel automatic pistol (see Plate 4) fulfills most of these conditions, but a .44 gallery charge automatic pistol would be better.

CHAPTER LII

SHOOTING GALLERY

PISTOL shooting in competitions or for practice is conducted either under cover, in the open, or partly under cover. The latter is much the best way, so I will keep this to the last.

An open-air range can only be installed in the country, away from buildings or annoyance to others. Even then it is not immune. Just before the war several rifle ranges in England were ordered to be closed because they inconvenienced golf players, and of course golf is much more important than shooting.

The present automatic pistol with its heavy charge makes such a noise that it can only be shot in an open-air range, well away from houses. The objection to such a range is that it takes so long to get to.

Instead of being able to fire a few shots at odd moments, as in Paris, a man who has a few minutes to spare must take a train into the country, wasting time and money getting there and back, and he can therefore only shoot if he has a whole afternoon free and "money to burn."

It requires great keenness in pistol shooting to endure all the discomfort of waiting for trains, standing in the wet, etc., for the sake of a few minutes' shooting.

The usual indoor range practice is even worse.

It is true it is "only round the corner," and takes only a few minutes to get to, but when you *do* get there!!!

The range is in a part of a building too dark and uncomfortable to be used for any other purpose.

If a narrow underground dungeon is too bad for a wine or coal cellar, a brilliant idea strikes the owner of the property: "Why not turn it into a public shooting gallery, and make it pay?"

The gallery is run on the pay, pay, always pay, and receive nothing, principle.

The shooter pays for the pleasure of ruining his eyesight and ears, pays for the target, pays for the cartridges, pays for the hire of a dirty, greasy, worn out old revolver.

However good a score he makes he receives no prize or encouragement.

No wonder, after one such visit, the public gives the place a wide berth.

The Gastinne-Renette Pistol Gallery at 39, Avenue d'Antin, Paris, is constructed and run as a pistol gallery should be.

The first essential is to have it in a building well-lighted by daylight and airy, and where the neighbours will not object to the sound of firing.

The ideal range is, as at Gastinne-Renette's, with the firing point covered and the range itself open to the air, but this is only possible under exceptional circumstances, and where gallery ammunition only is fired.

I am strongly of the opinion that unless gallery ammunition is used exclusively, an indoor or semi-indoor range is inadmissible, otherwise the shooting must, of necessity, be done in the country and in the open, with all its attendant inconveniences.

If the range is in an entirely closed gallery it should have plenty of top light (not artificial light), like a sculptor's studio, or be situated and lighted on the top floor of the house, like a photographer's studio.

Or it may be a long shed with windows down both sides.

A riding school or a gymnasium having plenty of daylight might do.

By the w y, although gymnastics do not need daylight (artificial light is just as good for them), one never hears of a gymnasium in a coal cellar.

It is only the shooter, who is a crank anyhow and not worth serious consideration, who has to put up with a coal cellar.

It is difficult to get an indoor range large enough for practice at moving objects.

So-called moving targets which run for a few feet are not moving targets at all.

To learn shooting at moving objects they should go fast and for a reasonable distance, not less than ten yards, and the further they run, and the more varying the speed, the better.

CHAPTER LIII

THE GASTINNE-RENETTE GALLERY

THIS gallery has been in existence for some seventy years and is constantly improved and it is the best gallery I know of in any country. In describing it I will be describing what an ideal shooting gallery should be like.

The entrance is through a well-lighted daylight passage past the gunmaker's shop of the proprietor. A pistol can be bought or hired, or alteration made to the sights or trigger-pull of one's own pistol, on the spot.

One then comes to a long, well-lighted gallery, with cupboards containing the pistols of the members and very accurate, well-kept pistols, for lending to shooters who have not brought their own (see Plates 2 and 10.)

Several pistol clubs, such as the "Le Pistolet" and the "St. George," shoot here on certain days, at which times the range is closed to the outside public.

The gallery is heated by hot water pipes in winter.

The secretary sits at a desk and sells the entry

tickets, gives the prizes (gold, silver, and bronze medals and plaques), and also keeps an accurate record of all winning scores made.

PLATE 15. GASTINNE-RENETTE GALLERY

The walls are hung with the framed targets which have won the Grand Medaille d'Or and other prizes.

Two marble slabs, engraved with the names of the winners of the championship of each year, are by the mantelpiece where hangs the stuffed head of a Sika stag I shot with a duelling pistol.

One of the long sides of the gallery faces a blank wall in the open air about thirty yards distant.

Along that side there are cubicles with glass doors facing this wall, and glass sliding doors opening into the gallery.

Each cubicle has a loading table with drawers for cartridges, etc.

These cubicles have transverse walls in pairs leading to this wall, so as to enable pairs of shooters, if they so desire, to shoot, without being disturbed by the rest of the shooters.

The shooter goes with an attendant into one of the cubicles; the door leading to the gallery is shut and the door on to the range is opened.

The shooter can be seen from the gallery but he is not disturbed by people talking or coming near him.

The assistant loads the pistols, works the metronome, keeps the score, etc.

If the score is good enough to win a prize the assistant calls the secretary to see the target and verify the score and record it in his book before the shots are painted out.

Paper targets shot at are brought to the secretary for verification and signed and kept by him.

Over the top of these open-air passages down which the shooting takes place, wires are stretched to break the sound, so as not to annoy the neighbours.

There are also sloping boards at intervals above,

PLATE 16. GASTINNE-RENETTE GALLERY—FIRING POINTS

so that a shot let off by accident cannot do any harm—the boards catch all wide bullets.

The prizes are given on a gradually increasing scale of difficulty, so that nobody need be discouraged.

The bronze medal for shooting at plaster figures at sixteen metres is easy enough for the most moderate pistol shot to win, he is thus encouraged to try for the silver medal at these figures, which is a little more difficult, and so on.

No medal in any of the series can be won more than once.

If a man wins the gold medal at that series at the first attempt he can still go in for the silver and bronze medals of that series, but, when he has won all three medals of a series, he can never compete in that series again, but of course can shoot for practice at them.

Some series call for extreme accuracy and some for endurance, as that for breaking a hundred small plates in succession—rapid-firing—under duelling conditions.

In Chapter XXXIII, I described the target used at Gastinne-Renette's Gallery for the three series for the Grand Medaille d'Or.

There are no second prizes in these series.

One gold medal is for twelve shots deliberate shooting with the .44 calibre duelling pistol.

A similar one for the .44 calibre revolver, and also a similar one for the duelling pistol, shot under duelling conditions.

All are shot at sixteen metres range (seventeen yards one foot).

To win either of the first two gold medals all the twelve shots must be inside the first ring round the bull's-eye, that is inside (not cut-

ting a ring of five bullets' diameter (2⅕ inches).

To win the third gold medal all the twelve shots must be inside, not cutting, the second ring round the bull's-eye, that is to say inside seven bullets' diameter (3.08 inches).

This latter appears the most easy competition, but on the contrary whilst some forty or more have won the first two medals, only five have won the latter, during the seventy years.

Chevalier Ira Paine is the only man who won both the first named gold medals. I do not think he tried for the third. In fact I have not seen or heard of any score of his shot under duelling conditions.

I am the only one during the seventy years the competitions have been in existence who has won both the gold medals for rifle shooting at moving objects at this gallery, the Running Rabbit and the Running Man, about five have won either one or the other of these medals.

CHAPTER LIV

OPEN AIR RANGES

A ROW of white squares, each with a black bull's-eye on it, and men aiming, aiming, and finally letting off their pistols at them, is such a mistaken idea of learning pistol shooting.

It is all so futile, so useless, except as a sport and a means of getting fresh air and relaxation.

To occasionally put a series of shots very close together on a stationary target is interesting, and shows what a good pistol and men are capable of when working in harmony. But to consider this the sole object of pistol shooting is the greatest mistake.

Rapid fire, the faster the better, is the essence of pistol shooting, the only practical use of it.

Deliberate shooting is a game, a sport, and a very good sport, but it is neither practical pistol shooting or the way to learn it.

An outdoor range gives the best practice, as figures can be put up at various distances and shot at in rapid fire, moving and disappearing targets can run in all directions, and come up unexpectedly like at a shotgun shooting school.

A shelter to shoot from under in wet or windy weather has the disadvantage of the noise from the shooting when full charges are shot, as is invariably the case in England.

A corrugated roof gives a terrible echo. It is better to stand in the rain and wind rather than be deafened.

Six hits in four seconds is the best I know of with a revolver when shooting at life size figures taken one after the other at distances varying from about fifteen to thirty yards.

This can be beaten with an automatic pistol. With an automatic pistol it is a matter of finding the right speed to swing across the figures.

A good open air pistol range can be made behind a rifle butt.

Behind the big butt for a thousand yards' rifle shooting makes a very big butt for twenty-five yards' automatic pistol shooting and allows for swinging and moving targets on an ample scale.

In an open air range great care must be taken to be very strict as to rules of safety.

There becomes a tendency to walk down to the butt to examine a target without first giving warning: to walk about with some cartridges still in the pistol, etc.

Things which would not be done in an indoor range seem to come natural to some men when in an out-of-doors range.

Targets that can smash are the best. Plaster heads are much better to shoot at in rapid firing

than to try and hit the six heads of wooden targets.

In the former case you see the débris of the smash as you pull the trigger and do not pause in your swing to the next target.

If there is no smash to the shot but only a bullet hole, one is apt to hesitate after each shot to look for the bullet hole.

It looks so much better and gives such a satisfactory feeling to instantly see the result of your shot.

A row of plates or bottles placed at various distances and smashed one after the other very rapidly is much more of an encouragement than, after having fired without visible result, to be told ten minutes later that you have made all hits.

There are small rubber balloons manufactured in France which can be filled with water.

The balloons when empty pack in very little space. A small pump is sold with them, it can be regulated to deliver a pre-arranged quantity of water into each balloon, and then a twist at the neck of the balloon closes it.

If the water is coloured with Condy's Fluid a hit looks very conspicuous and pretty when the balloon bursts on being struck.

Have them thrown up to shoot at. Great care must be taken that the bullets go where they can do no harm.

A full charge automatic pistol should not be used for this—a duelling pistol, having a smooth

bore barrel, and shooting No. 8 shot is good practice and can be shot where shooting a bullet would be dangerous. I have killed 44 out of 80 live pigeons in this way.

It is dangerous to shoot bullets at hard substances. To shoot at a stone thrown up, a ginger beer, or a soda water bottle, may cause very dangerous ricochets.

CHAPTER LV

SHOOTING IN LITERATURE

MOST extraordinary ideas prevail amongst writers as to shooting in general and especially pistol shooting.

One novelist makes his hero see "a flame zigzagging in the darkness," he, not troubling to ascertain who was carrying the light, friend or foe, without hesitation "drew his pistol, took an aim of a good thirty seconds' duration and fired straight at the flame."

To aim "straight at" a moving object is the way to miss it, and if the aim is taken for thirty seconds the hand gets so shaky that a miss is certain, but most marvellous thing in literature, the hero *does* miss.

Solomon said, "There is nothing new under the sun." He was wrong. The author who makes his hero miss is absolutely unique; in all other literature the hero never misses, none of Homer's heroes miss, nor does David miss Goliath nor William Tell miss the apple nor Robin Hood the deer.

This unique hero takes an even longer aim,

later. He hears a horse galloping towards him and *aims for ten minutes* at a point two inches above where he expected the horse's head to appear round a rock. I suppose he aimed two inches high so as to allow for the fatigue to his arm during the ten minutes' aim, causing it to slightly sag down.

I expect the next novel I read, the hero, knowing his enemy will arrive in a month's time, will keep an aim well above the railway station till he arrives.

Evidently the idea is the longer the aim the more accurate it is, forgetting that human muscles and eyesight tire, and that fast moving objects cannot be hit with a stationary aim.

I have known a stag turn and go the opposite direction whilst a man was aiming at a tree he expected it to pass.

It is amusing how, in a play, the hero after he has made the villain desist by pointing a revolver at him, contemptuously throws the revolver on the sofa and walks away.

It never occurs to the author of the play, or the actor, that the villain would instantly seize hold of the pistol and turn the tables on the hero.

After the hero has covered the villain with the pistol and has been applauded the "situation is over" so he throws away the revolver or puts it back in his pocket and there the incident ends.

In one play the hero gives a loaded .44 revolver as a keepsake to a small child.

This sort of thing is merely ridiculous and does no harm.

But harm is done if an actor through ignorance shoots another actor.

I have twice seen such an accident on the stage. Once a man blinded another in both eyes, and in the second case in one eye, by firing blank ammunition right into the other's face at a few feet distance.

Men have been killed, one only a short time ago, by having the wad of blank ammunition shot into them. In one case the gun had several wads crimped hard into the shell so as to make a good loud bang when fired.

One man in this play was supposed to come across his enemy, and as the latter fled, to shoot him. The actor, who I believe said he had never shot a gun before, put the muzzle against the other man's back when he fired and killed him.

He had been told that it was blank ammunition and he thought it could do no harm. This is the cause of all such accidents. Being blank ammunition it is considered to be harmless.

Old ladies are laughed at when they scream and hold their ears when a man begins to "brandish" a revolver on the stage or poke about with a gun, with his finger on the trigger. But the old ladies are quite right to be alarmed.

There is no knowing what may happen when a man ignorant of firearms, has one in his hands, even if it only has blank ammunition.

A very favourite attitude with actors is to bang the butt of their rifle on the ground and then put both hands over the muzzle, but in this case if the rifle "explodes," it is only their own hands that they injure.

For the safety of others this is the best thing they can do, before someone else gets hurt.

Before being allowed to fire blank ammunition on the stage, a man should be properly instructed in the safe handling of firearms.

Shooting blank ammunition on the stage is always a risky job. People are so huddled up, that it is difficult to appear to shoot at a man without shooting close enough to him to injure him.

If the gun is fired over the man's head, it may set the flies on fire, burn the eyes of someone in a grand tier box, or the limelight man.

It is a case of "save me from my friends" when a writer who is ignorant of shooting matters tries to extol someone's marksmanship.

We read "the anti-aircraft guns at once began to bellow forth defiance. The shooting was wonderful and it was only the hardest luck that they did not wing an enemy."

As the number of shots is not mentioned and the element of luck introduced, it is not possible to analyse this shooting, but another writer is clearer. He says "he got within fifty yards, well within point blank range, and fired 117 shots and the enemy was then observed to be leaning forward, so it was apparent that he had been winged."

Now here we have all the facts necessary to work out a simple rule of three problem.

As 117 shots are to one shot, so is fifty yards to X (the distance the adversary must be off to enable him to be winged, with a single shot).

This makes X equal 15.381 inches.

As to kill is about three times as difficult as to wing, divide by three, this gives 5.127 inches as the longest range at which it is possible to kill a man with a single shot, "which is absurd." Q.E.D.

Another novel writer made use of one of my books very effectively to describe the duel, with all details correct, except that he made the distance between the duellists *five yards*, and they missed each other twice at this distance!

Allowing for each duellist three feet from where he stands to the end of the muzzle of his pistol they would have only three yards between the muzzles of their pistols. The writer must have either been unacquainted with French metric measures (I gave twenty-five meters as the duelling distance) or else he confused it with a sword duel.

CHAPTER LVI

GRIP

THERE is a great variety of opinions as to the shape and size a pistol stock should have so as to give the best grip.

As I have already mentioned, the grip which suits me best is that on the French duelling pistol. But what suits one man may not necessarily suit another.

A smooth, mother-of-pearl stock is very slippery to me, but some think this gives the ideal grip.

Some men have fat flabby perspiring hands, others have cold damp hands, both of these seem to be able to hold a mother-of-pearl grip comfortably, but they do not suit a man who has dry warm hands.

In the revolver days I knew several men who could not grip the Smith & Wesson Russian model revolver comfortably. They said the stock was too small for them. Even the Colt stock, according to them, was too small. They, in consequence, induced the makers to supply Colt revolvers to suit "The English market" with enormously big stocks.

Now these very men who found the normal stocks too small did not have abnormally large hands. It was that they held their pistols with much too rigid a grip.

Some men have special stocks made so that they "can get a firm grip."

Some of them even go to the length of putting India rubber tennis racket grips over the pistol stocks. I have tried shooting one of their pistols so ornamented (?) and found it was like trying to shoot with a big potato held in my fist.

Others, in order to obtain this "firm grip," smear the stock of their pistol over with wet modelling clay, take a grip of it and then have a plaster cast made of their finger prints in this clay and get a stock cast from this. When they hold this monstrosity with their fingers embedded in it, they claim to have a perfect hold.

The idea they are working for is an entirely wrong one. The pistol should be held as a fencing foil, lying in the palm of the hand. Because the left hand gets burnt when many shots are fired in rapid succession from a rifle or gun, a hand guard was invented which slips over to the fore end of the gun and protects the left hand from contact with the hot barrels.

It was also claimed that, having to hold this guard made the shooter always hold his hand in the same place, and that this was a great advantage.

The rigid grip on a fixed spot is, as a matter

of fact, a disadvantage. It caused me to give up this hand guard and substitute an asbestos glove for the left hand.

In game shooting with a rifle, or gun, one shifts the left hand constantly, according to the angle of the rifle or gun to your shoulder. For a high shot the left hand is thrust forward, for a low shot the hand drawn back.

To sit down and shoot off the knees, the left hand is much further back on the rifle than if you stand up to shoot off hand.

If you find yourself shooting under, you shift the left hand forward for the next shot so as to shoot higher.

You cannot do all these niceties (which make all the difference between first class shooting, and merely good shooting) if your left hand is tied to one place. The same applies to pistol shooting.

The pistol should not be held in a "firm grip" as these inventors of potato-shaped stocks imagine.

A fencer does not keep a "firm grip," nor does a shotgun man.

All have their weapons lying in the palms of the hands loosely and easily, the grip of the foil is only tightened momentarily for parrying or thrusting and the game shot handles a rifle or shotgun as lightly as a woman nursing a baby.

A pistol stock which has all the fingers embedded in it stops all wrist play. It may answer for a long aim at a stationery target but for any rapid shooting it is impossible.

How can a man draw and shoot in one movement if he has to fit his fingers first into each hollow excavated in the stock? He might as well try to pull on a glove each time before he draws his pistol.

If he gets the hold the least wrong he will miss and probably also get his hand cut.

How can a man cock or slip on the safety bolt if he first has to take his thumb out of the "dug out" in which it has taken refuge? He will most likely fumble the whole thing and drop the pistol.

Very many pistol inventions are the result of a man who, shooting for the first time, discovers difficulties merely due to his own clumsiness and inexperience, and instead of consulting a pistol shot, invents something to overcome these imaginary difficulties.

I have actually seen such an inventor shooting in a competition with an iron rod up his sleeve attached to his pistol "to keep his arm steady."

An inventor came to me with something he said would stop all runaway horses, and was very angry with me because I would not try it on one of mine, although I told him mine were properly broken horses, not runaways.

The invention consisted of two India rubber bags which, un-inflated, were to be put inside the nostrils of the horse.

If there was any difficulty in stopping the horse, a pair of bellows was worked, attached to a rubber tube connecting these bags to the driver.

This inflated the bags, and the horse, according to the inventor, "at once comes to a standstill."

I told the inventor that a horse thus choked would throw himself about, and cause a fearful smash before he died. He probably thought, "what lack of imagination" horsemen have.

A wooden or vulcanite stock with a small clean-cut file pattern so as to give a non-slip hold is good.

A too small grip has the fault of driving the nails into the ball of the thumb; it should be just thick enough to avoid this, any thicker would be clumsy.

An ivory stock is heavy, but this may be an advantage if there is weight needed in the stock to counterbalance the barrel, otherwise ivory gives a good grip, if roughed.

The depth of the roughing depends on the tenderness of the hand of the shooter.

A roughing which would make one man's hand sore is hardly enough of a non-slip hold for a man whose skin is harder.

Sometimes screw heads and pins are not quite flush with the stock and may chafe the hand.

They and any roughness left on screw heads by the unskilful use of the screw driver should be filed down smooth.

A sore hand which gets hurt at each shot is very detrimental to good shooting and the shooter is constantly trying to get a fresh grip in order to save his hand.

Automatic pistols have almost universally a projection over the hand between the thumb and the trigger finger for the slide to work on.

This turns the stock into a "saw handle" which used to be common on English duelling pistols.

I have tried such a stock with very good results on a revolver, but it is in the way of one-handed cocking.

An objection to a "saw handle" is that it compels the grip to be always taken in the same place, and as I said before, the grip should be movable higher or lower, according as you find you are shooting too low or too high.

A little rosin ground fine and rubbed on the stock and hand gives a good non-slip grip if the stock is greasy or slippery.

Do not shoot with gloves on. It destroys the sensitiveness of the hand, especially the trigger finger. I am always afraid of being shot by accident when a man shooting next me wears gloves, especially the slippery so-called "chamois skin" ones.

CHAPTER LVII

TRICK SHOOTING

"CHAMPION SHOT" shooting on the stage must not be taken too seriously.

No one can keep on shooting at small objects on a man's head or held between his fingers without an occasional bad shot, and if it misses by only half an inch, such a miss may cause the death of the assistant.

Unavoidable sources of accident are, a weak cartridge giving a low shot; a hang fire, or, as in one fatal accident, the rifle blows open, lowering the muzzle and the bullet entering the assistant's forehead.

Aiming to graze the top of the ball minimizes this risk but does not eliminate it.

A miss too high does not matter, but a miss too low means death to the assistant.

Managers of theatres are now very chary, since this accident, of employing "Artistes" who do real shooting. It is too dangerous and the police will not allow it. All sorts of ways to minimize risk are employed. When objects are held to be shot at, steel thimbles over forefinger and thumb are concealed under a glove.

A steel skullcap fitting down to the eyebrows with a rod some four inches long projecting from the top is employed to hold the ball, the steel skullcap concealed under a wig with low fringe of hair to cover the forehead. This is worn by a woman assistant, her high piled up head serving to hide the rod.

There are several other reasons for employing a woman assistant instead of a man.

It looks so much more effective to shoot things off a woman's head or fingers; and she can wear long gloves in evening dress without exciting suspicion that she has steel gauntlets concealed under them.

When well arranged, the ball, two inches in diameter, and the aim taken to graze the top of the ball, a miss must be fully eight inches too low to do any damage to the assistant when she wears a steel skullcap down to her eyebrows under her wig of piled up hair.

Some do not even risk that, but, by an arrangement of a steel plate connected with a lever below it, and the whole hidden behind the "back cloth," the shot is fired at the plate a foot higher than the assistant's head; this plate forces the bottom of the lever, armed with a spike, forward. The spike breaks the ball and immediately returns out of sight through the "back cloth."

Some natural object is painted on the scene over this hidden target for the shooter to aim at.

I give below a few exhibition shoots, ranging

from real shooting, through "assisted" shooting down to "trick" shooting, and simple conjuring tricks.

The reader, if asked to shoot for a charity bazaar or to amuse people at a village fête, can choose from this list, according to the rigidity or elasticity of his conscience "in the cause of charity." And charity covers a multitude of sins.

It is curious how one never can tell what will be a success with the public.

A really difficult feat fails to impress the audience and a simple easy shot "brings down the house." What must be constantly borne in mind is that you must never make a bad shot, that spoils the whole thing.

You can cover up your mistakes sometimes.

If you hit the ace of hearts, have it handed round to the audience and go on to the next item. If a shot is encored do not repeat, go on with your programme.

To do something well and then, trying to repeat it, to make a miss, is a fatal mistake.

If your first shot at the ace of hearts just misses the heart by a shade, this does not matter.

Keep on shooting and make a good group "all cutting into one hole" and hand it round to the audience, thus covering up the traces of the bad first shot.

Stop shooting as soon as the hole cuts well into the pip. If you try one shot too many and get it clear of the "all shots into one hole" then

you have made a fearful blunder—a three shot group is ample.

Never attempt anything which you are not able to do easily. To make a lot of easy shots without a mistake is far preferable than to try difficult shots with one or two failures.

If you can trust your nerve it is as well to keep the most difficult shot to the last, so as not to have an anticlimax. As a climax (if your conscience will permit you), give one or two "assisted" shots, so as to end brilliantly.

Always practise on the actual stage and with the same lighting as you will have to shoot under, when giving the exhibition.

If you do not do this you may find the light different, or so bad that you will not be able to do yourself justice.

A stage open to the sky, is, on a calm day, best of all, but there is the risk of a wind springing up. Always shoot on a stage elevated above the spectators so that all can see, and have the sun at your back.

On an open air stage you can finish as follows:

Have an old-fashioned .44 Winchester, black powder, repeating rifle. These can still be picked up at second-hand gunmakers' shops.

Get cartridges for it loaded with No. 10 shot.

Have a lot of the rubber balls filled with water.

It looks most effective if the water is of various colours for alternate balls.

Get an assistant to throw them straight up as

high as he possibly can, and break them in succession.

With practice you can break them as fast as he can possibly throw them.

The higher and straighter up he throws them the easier they are to break and yet the more effective they look.

The stop butt should be an iron box with a back sloping downwards, away from you, at an angle of forty-five degrees, deflecting the bullets into a tray full of sand.

Some "numbers" for the programme (range fifteen feet) I give below.

Put a playing-card up edgewise horizontally and cut it in half.

Be sure the background is such that you can see the white edge of the card against it.

If you get your elevation just right, the card will be cut.

Use a .44 calibre bullet in all shooting, as that gives you more leeway in case you are a little wrong in your elevation.

This is the most difficult shot of all and should not be repeated.

The same shot with the card vertical.

This is slightly easier, as one is less apt to miss horizontally than vertically.

The "assistance" in this shot is to have the card as much out of dead edge on to you, as the audience will stand without detecting it.

Unless a spectator is absolutely behind the

shooter and looking over his right shoulder he cannot see if the card is not absolutely dead edge on.

The duffer's way of doing this shot is to fire dust shot instead of a bullet.

Hitting the ace of hearts I have already described.

To hit several pips on one card is very difficult. It takes really good shooting even at the five yards' range to hit the six pips in succession on the six hearts.

Also this cannot be "assisted" in any way unless you fluke one pip when shooting at another with the .22 Colt target automatic pistol (or see Plate 4). When the "gallery ammunition" automatic pistol is invented air filled rubber balls can be put in a row and broken in quick succession. In "assisted" shooting they are made of dark rubber with a minute white bull's-eye painted on each, and the balls stand in recesses in a screen of the same colour as themselves, so that all but the white spot is invisible.

To the uninitiated it looks as if it is the minute white bull's-eyes which are hit.

If the air balls are large, the shooting is very easy. If shot is used instead of bullets any one can do this trick but the balls must be far enough apart to avoid breaking two or more balls at one shot.

To snuff a candle if the wick is aimed at requires quick shooting as more than a momentary aim at the wick dazzles the eyes.

It is better to put the candle in a candlestick and cut the candle to a predetermined length, and have the pistol sighted to shoot that much too high.

The aim is then taken at the bottom of the candle in order that the bullet hits the wick, and therefore there is no glare in the eyes from the flame.

The "assisted" way of doing this shot is to have a pair of bellows with nozzle curved at right angles, the side of the bellows towards you made of steel, the nozzle pointed at the candle wick, behind the candle, of course concealed so that when the background is struck the bellows blow the candle out.

I give a number of other shots and other information on exhibition shooting in my *Art of Revolver Shooting* to which I refer the reader if interested in such shooting.

A most sensational looking shot is a purely "assisted" one.

It is to break two air balls simultaneously with a pistol in each hand. The balls are placed some two inches apart. One pistol is loaded with dust shot, the other with blank ammunition, or even, if the shot charge makes a lot of noise and smoke, the second pistol need not be loaded at all.

Holding the pistol loaded with shot in the right hand, the other in the left hand, aiming between the balls with the one loaded with shot and hold-

ing the other alongside it, pull both triggers together, breaking both balls with the pistol loaded with shot.

Tunes are played on a target so arranged that hitting plates either makes the plates ring, or else the plates drive back and strike bells.

These plates are large so as to be easily hit, but the exhibition is "assisted" by small bull's-eyes on each plate and the audience think these latter are alone hit.

The tunes are usually played with several "pump" repeating .22 rifles, the rifles being changed at each pause in a bar in the tune that the band plays.

Winchester .22 Automatic rifles are better, though I have never seen a professional use them. The automatic needs only trigger pressure and turns and quick runs can be played with it.

When the gallery charge, automatic pistol arrives, it will be possible to use it in the same way for playing tunes. The clips can be dropped out and a fresh one inserted when the tune gives a pause of a bar, care being taken not to fire the last shot, but let it carry on the first cartridge of the new clip, as I have explained earlier.

The plates should be so arranged as to show the "black notes" like a piano does, otherwise it is difficult to play tunes having sharps, flats or accidentals, if all the notes look alike.

I saw a "bandmaster" (?) at a village horse-show overcome this difficulty of his drum and

fite band by allowing the "band" to ignore the black notes and to substitute naturals for all sharps and flats; the effect was very fine and greatly applauded!

CHAPTER LVIII

THE DEVILLIERS BULLET

Dr. Devilliers has patented a spherical bullet, made of a secret composition, which is shot out of pistols with only the fulminate of the cap to propel it.

It cannot be used in an automatic pistol loaded through the magazine as there is no recoil to operate the mechanism, but it can be shot from a magazine pistol if used as a single loader.

It is primarily intended for a duelling pistol and can be used in revolvers.

The idea is to have a bullet which can be used in competitions under real duelling conditions against live opponents instead of at targets.

The pistol barrel has to be kept cold. When it gets hot after a few shots, the bullet will partly melt and get soft and then it does not take the rifling.

The usual way is to have a sort of champagne cooler full of ice and to ice the loaded pistols for a few minutes before shooting them.

The bullet strikes with considerable force, enough if not protected against to put out an eye or injure the throat if struck.

I have had several painful grazes on the arm from these bullets going up my sleeve and I also shot out a piece of skin between the forefinger and thumb of the pistol hand of my opponent the first time I fired one of them.

PLATE 17. SHIELD ON DUELLING PISTOL WITH GUARD FOR DEVILLIERS BULLET

He fired a shade sooner than I and was lowering his pistol when my bullet struck his hand, the skin being stretched tight on the stock of his pistol, the bullet cut a semicircular notch out of his hand.

Since then a thin steel shield is fixed on the

pistol just in front of the trigger guard so that the hand is entirely protected when aiming (see Plate 17) I patented similar shield on a soldier's rifle to protect his usually exposed left hand, and also to partially protect his head, when shooting.

Do not shoot at any one at a shorter range than twenty metres (twenty-one yards two feet); the blow from the bullet at twenty metres is not too severe if the shooter is properly protected.

It is useless for practice to shoot at a longer range than twenty metres as the bullet rapidly loses its accuracy beyond that distance.

Wear goggles fitted in a fencing mask, the goggles of thick strong pebble glass or of triplex safety glass (which is lighter).

The fencing mask fitted with heavy goggles is very cumbersome. I think an aviator's cap and triplex glass goggles is ample protection except that the throat must also be well protected by a thick leather stock as strong as a saddle flap.

A blow on the throat may do serious damage.

I had a bullet come through a too thin leather stock and hit my throat.

I do not think the body need be protected except by a piece of leather low over the abdomen and this can be worn under the trousers.

It is as well to wear old clothes or a thin black blouse as the bullets leave greasy marks.

The object of having the blouse black is that the bullet marks should be more easily seen by the umpire, and scored.

Wear as tight fitting things as you can as long as your right arm is free, it gives your opponent a smaller target to score on. If he hits some flapping part of your blouse it scores him a hit even if it did not touch your body.

In shooting in a competition it may be as well to stand sideways so as to give the opponent as small a target as possible, but in a real duel standing sideways increases the risk of being killed if struck. Always have a doctor present, as a wound from this bullet may be septic if not properly dressed at once.

In a real duel a bullet, if the chest is hit when facing the adversary, only goes through one lung, whereas if the man struck is standing sideways the bullet will pierce both his lungs and so make recovery from the wound much more doubtful.

In winter be very careful that the bullets do not freeze, if frozen they penetrate deeply.

The bullets are loaded into the special cartridges as follows:

The cartridge must not contain any powder.

The bullet must not be squeezed into the cartridge, this would distort it as it is soft.

The bullet must be very lightly inserted in the cartridge.

Open the pistol, keeping the muzzle elevated, insert the cartridge in the breech, lower the muzzle, put on the cap and close the pistol.

The inventor recommends that only the special cartridges of his invention be used, these have

no cap but only a nipple, and you do not put the cap on till the cartridge is in the breech of the pistol.

Competitions take place with this bullet as in an actual duel, the shooting is in pairs until only one competitor remains, the one of each pair who hits his opponent first is the winner of that pair.

The bullets hit too hard for it to be an amusement suitable for ladies.

Great care must be taken to be sure to shoot Devilliers bullets and not lead bullets, by mistake.

They are useful for galloping practice on horseback, shooting at an air balloon fixed to posts, where lead bullets would be dangerous to use.

The cartridges can be reloaded and used many times.

When the cartridge has been fired there may be difficulty in removing the exploded cap. A wire pushed into the cap through the mouth of the cartridge dislodges the cap, but care must be taken that the cap is an exploded one.

These bullets are very apt to ricochet from walls so spectators must take care.

A canvas sheet hung loosely behind each shooter is the best stop-butt, as it gives to the blow of the bullet and stops ricochets. A bullet once fired is too distorted to use again.

CHAPTER LIX

KILLING INJURED ANIMALS

UNLESS in the hands of a very skilful shot the pistol is most unsuitable for killing injured animals with.

They will probably be hit many times before a vital spot is struck and so be horribly tortured.

This remark applies especially to small animals like cats and dogs.

The best weapon for this purpose is a 12-bore shotgun loaded with No. 5 shot but even as small as No. 7 shot is very deadly if fired at a range of not more than four or five feet off.

With the shotgun a shot directed behind the ear into the top of the neck kills instantly.

The forehead shot is not suitable for a shotgun on large animals as the strength of skull prevents the shot penetrating, and the animal is only stunned.

With a pistol the spot to hit is between the eyes where the hair curls in the middle of the forehead in horses.

It is better to hit too high than too low in the forehead shot as a low shot misses the brain.

Load both barrels of the shotgun and be ready

to fire the second barrel instantly if the horse does not collapse at once at the first shot.

The head shot at a few yards off is the place to shoot a cat or dog with the shotgun but do not attempt to shoot them with a pistol unless you are a good shot, able to shoot into the ace of hearts at five yards' distance, aim at the top of the head, or you may break the jaw instead of killing the animal.

People have sometimes been wrongly prosecuted and convicted for torturing a dog when they were trying to kill it instantly and painlessly, but lacked the skill and nerve.

When an animal is in pain, especially if it is crying out and struggling, a man is very apt to lose his nerve and be unable to kill it properly, but will strike wildly.

In killing an animal, in order to do it as painlessly as possible, it is necessary to treat the matter quite calmly and in what looks to be a cold-blooded manner, and to know the vital spots.

Decide the exact spot to shoot at, heart or brain, and hit it in that exact spot and be ready to repeat the shot, if the animal is not instantly dead.

With a horse I find it is best to put some hay or grass down in front of it, and when it puts its head down, with its forehead vertical, it gives a good chance to shoot. There is no use trying to pull the horse's head into position and get struggling with it. To shoot a horse, do not use a pistol of smaller calibre than .44 with full charge.

If properly done the horse feels no pain.

If several horses have to be shot, do not let them see each other shot, or see the dead bodies or smell them.

A shotgun cannot be used in a crowd, nor for that matter can a pistol.

As soon as a horse is injured everyone runs up to enjoy the sight and they crowd round, so great care must be taken not to shoot until the people are cleared away from the line of fire.

If possible get the horse into a yard with a high wall round it before shooting and be sure boys are not perched on the wall.

I saw a man kill a small dog instantly as soon as it was run over by a motor car by picking it up and dislocating its neck by stretching, like wounded hares and rabbits are killed.

But this requires great skill, knack, and nerve. Otherwise not only would the dog be further tortured but he would bite.

Nobody can understand his fellow creatures or be judged by them. Each human being from birth to death is absolutely alone, everyone is misunderstood as to his motives and thoughts, he is as separated from others, even when in a crowd, as if the Atlantic Ocean were between them.

He is praised for what does not deserve praise, and blamed for what he is not guilty of.

He cannot understand why another finds pleasure in what he himself hates.

One man likes to get soaking wet crawling all

day to shoot a stag, which another thinks is folly, as a stag already shot, can so much easier and cheaper be bought at the poulterer's shop.

I cannot understand the pleasure of sitting up all night playing cards, smoking and drinking, when it is much more comfortable to be sleeping in bed; another man thinks cards, drink, and gambling Heaven on earth.

To give an instance of how one's motives can be misunderstood:

A poor old worn-out white horse, after struggling on slippery cobble-stones to pull a cart load of stones, fell and could not get up again.

An eager crowd at once collected watching the owner thrashing the horse over the head and kicking it.

The horse was struggling desperately to rise and kept falling and groaning and was bleeding at the mouth where the man was kicking it.

I rushed up to remonstrate. A man, a stranger to me, called out "I can't stand this, let us buy the horse between us."

The owner of the horse made us pay much more than the horse was worth.

We got a vet. who said the horse was so injured that it must be killed, so he killed it.

Next day a paragraph appeared in the local paper.

Two well-known visitors to our beautiful town performed a very graceful act yesterday.

A poor man lost his horse, his faithful dumb friend who had been his constant help and companion for years. These kind gentlemen took compassion on the hard lot of this man in his grief and presented him with a handsome sum to buy himself a new horse.

The brute made quite a good thing of it, as the paragraph brought him various sums from sympathisers, and he was able to buy a heavier whip, and a stronger pair of boots, and a new horse, to thrash and kick.

Possibly the historian who wrote that Nero fiddled whilst Rome was burning was mistaken and poor old Nero was doing his best telephoning for the County Council Motor fire-escapes to come and save the Christians from the burning houses.

I misunderstand others. I did not appreciate a man's piety when he refused to help me rescue a dying horse because it was Sunday.

The best instrument of all for killing injured horses is what is obligatory in all Belgian slaughter houses, not only for cattle but for sheep and pigs. (See Plate 18.)

It consists of a short pistol barrel of .38 bore with a bell-shaped muzzle which is applied to the forehead of the animal to be slaughtered.

A tap with a mallet fires it and the bullet goes through the brain and spinal column of the neck causing instant death. Its fault is that it may go off by accident if dropped on its plunger.

No Belgian race or horse-show can begin till a

veterinary is present with this instrument, to be used in case of accident.

One can do very little to alleviate the torture of a horse standing with a broken leg, or lying with a broken back in the London streets, owing to the regulations.

PLATE 18. THE GREENER KILLER

This illustration clearly shows the position in which the Killer should be placed. It is advisable to have the barrel in a line with the pith, but so long as the "medulla" is pierced, instantaneous death is assured.

Thrice, within a few months, I have stood by a horse for hours unable to do anything for it, but to put a rug over it as it was shivering so from the

cold (having been injured when in a profuse sweat), and moisten its mouth.

I was not allowed to kill the horse, only a licensed slaughterer is allowed to do that, and then only if the owner can be found, and gives his consent for the horse to be killed.

I have since seen one of the principal horse-slaughterers of London and got his telephone number, and arranged with him to send immediately to any part of London, at any time of the day or night, if I telephone to him.

But even then if we cannot communicate with the owner of the horse we will have to stand doing nothing, possibly for hours, beside the suffering animal.

The poor old worn-out, half-starved horses in London are not only worked to death, but when injured, they are not even allowed to die, without further torture.

There is another form of humane killer which I am not able to endorse, although the Royal Society for the Prevention of Cruelty to Animals seem to think highly of it.

I refer to the instrument which consists of a pistol fixed at right angles to a pole called, I believe, the Humane Killer.

The pistol is fired by pulling a wire which runs down the pole to the hand.

I consider this instrument very dangerous to use for slaughtering animals but it would be very useful in trench warfare.

An ordinary firearm is dangerous enough if it happens to be pointed in the direction of the spectators. But what will be thought of a pistol which, when you carefully keep what corresponds to the barrel (*i. e.*, the pole) from pointing at anyone, you find it shoots at right angles to your aim.

Several of us stood round a man demonstrating the operation of this weapon when unloaded. I said to him, "You cannot bring that pistol on to the forehead of that stuffed ox's head without pointing it at one of us during the process."

He was not able to do so. Each time he tried one of us called out, "You are pointing it at me."

I will explain by analogy the reason of this difficulty.

Some men, in defiance of the conventions, cut cheese into small cubes, stick their knife into them and convey the cheese into their mouths, without cutting their mouths, and acquire great skill by long practice.

Take a sharp knife-blade, fasten it firmly at right angles to the handle, and ask an expert cheese eater to cut cubes of cheese and transfer them to his mouth with this safety (?) knife. He will cut his mouth before he has eaten half a dozen pieces of cheese.

CHAPTER LX

COMPETITIONS

THE duelling clubs at Gastinne-Renettes' have very practical and interesting competitions.

These clubs exist for duelling practice, there is no shooting with deliberate aim to make highest possible scores, all is conducted on actual duelling lines.

The word duel means *single combat*, so all these competitions are conducted in pairs, the winners again competing in pairs and so on till finally only one remains, as in cock-fighting.

Each participant in such a pool, when putting down his name, pays a nominal sum which goes to provide a medal for the winner.

In order that each competitor shall compete against each other competitor, there are printed scoring-cards on the lines of longitude and latitude in maps, so that by running the finger down the list of names and then at right angles down the spaces for results, it can instantly be seen when any particular pair must compete and at which target each will stand.

Each competitor alternately stands to the right or to the left of whoever is his opponent.

Only the pistols supplied by the range are allowed to be used, and these are given so that each shooter uses each pistol in turn and as all are purposely varied as to trigger-pull it requires a really good shot to win. He never knows if he is going to have a light or heavy trigger-pull.

This is the chief difficulty in these competitions, as also in actual duels. When a pair of competitors are each facing a separate man target, the director of the combat gives the word "Attention, feu, un, deux, trois."

If they both hit anywhere on the figure, the one who fired first is the winner of that pair.

It is usual to have a timer, to decide who fired first.

The director cannot fulfil both offices effectually.

After all have fired in pairs, each with each of the other competitors, the totals are added up and the one who has won the most combats is the winner of the medal.

If two or more have an equal score then these again shoot against each other to decide the winner of the medal.

It is not good scoring but quick hitting which wins.

A good hit counts no more than a bad one; a hit in faster time than the other shot, wins.

Winners are not the same men who win at deliberate shooting. Target shots seldom win, it is the lightning quick shot who wins, even if he cannot hit a smaller target than one eighteen inches broad by five feet high.

The whole art of this shooting is to be able to keep from missing by more than three inches either side of your aim, not caring what your trigger-pull is, or how it varies for each shot.

As to elevation, that needs no attention; you cannot miss over or under a five-foot target.

Bring up at top speed putting all the attention on not jerking to the side should your trigger-pull happen to be one of the heavy ones; aim slightly more to the right than the actual centre of the figure to allow for an occasional pull to the left with an extra heavy trigger-pull.

It is the very hard pulling pistols which give almost all the misses.

Men in constant practice in such competitions are in the best training for a duel or for self-protection.

With Clubs which use the Devilliers bullet the competitions are conducted on exactly similar lines, except that the competitors fire at each other instead of at iron targets.

Theoretically this is even better practice. It gets a man used to seeing his adversary actually before him and being able to study his movements and note if he is active, and try to be a shade the quicker of the two.

The inaccuracy of the Devilliers bullet as compared to the lead bullet (with a powder charge) is a great disadvantage.

You feel that there is an element of fluke in the shooting. You may make a very good shot and

the bullet being too soft or the barrel too hot that bullet does not take the rifling properly and gives you an unmerited miss.

Seeing your adversary raise his arm as you do yours and trying to anticipate his let-off by hitting him before he can hit you, is the great advantage of the Devilliers bullet as training for a duel.

In snapping practice with an empty pistol, it is well to practice facing your reflection in a mirror to get used to the adversary's arm rising.

When first trying it this necessity to get used to anticipating your adversary's movements is very apparent, a man who can shoot very quickly and coolly at an iron target when standing side by side with his opponent does not see the other man, he is thinking only of time.

When facing his opponent and shooting at him he watches his opponent's hand and tries to time him, that is to say fire just before the moment his adversary's arm is absolutely level to shoot, just as you time a pigeon out of a trap for when he is well clear and yet before he can make his dart.

A well-known pigeon shot said, "I do not understand all this talk about easy and difficult birds, all birds are easy if you time them right."

The same with duelling, if you take your opponent just *before* he can get his swing on to you he is properly "timed" and "an easy bird."

CHAPTER LXI

POLICE PISTOLS

I MODELLED a statuette of a mounted cowboy and gave it as a challenge trophy to be shot for with revolvers, open to all citizens of the United States.

It was won first by Dr. Louis Bell, then after two others had won it, it was finally won in 1894 by Roundsman Petty of the New York Police Force, who twice successfully defended his title to it, and thus it became his own property.

Since then the police in several states have regular police competitions.

I also gave a statuette modelled by myself as a challenge pistol trophy to the State of Maryland (my native state).

For years I tried to induce the police authorities of London, England, to let me give a challenge cup for the police to shoot for, but without success, till, by perseverance, I, in 1915, induced them to do so.

In 1917 an automatic pistol won it, till then it was shot for only with revolvers.

I am sure the better the police can shoot, the less apt they will be to draw a pistol unnecessarily;

they are confident in their skill; it is the man who is given a pistol for the first time who looses off and hits the wrong man.

I think it is a mistake to arm police with a .38 or .32 pistol instead of a full-size .44 or .45 military one. A policeman has often to face great odds and a mob will not, like enemy soldiers in battle, spare him when down. A mob will kick him to death. It is wrong therefore to give him a less powerful weapon than a soldier is given.

I suppose he is given the smaller pistol, as in some countries the police do not carry a pistol openly as part of their equipment so when they do carry pistols they have them concealed.

I think also this concealment is a mistake; if a pistol is carried openly and the carrier is known to be a good shot, he can keep order without shooting, whereas a man with no visible pistol may be ill-treated because he appears unarmed and therefore harmless; and he has to draw in order to maintain his authority or in self-defence.

In the case of my Challenge Trophies given in the United States, the competitions are changed from revolver into automatic pistol competitions as the revolver is obsolete.

If a policeman is unarmed, he cannot be expected to keep as cool and have as good judgment in an emergency when his own life is in danger as he can be when armed with a good large calibre pistol that he knows how to shoot to such good effect that he is in no personal danger.

If, when a riot starts, he can instantly drop a ring-leader each time the crowd attempts a rush, or break the arm of any man trying to throw a stone, he can get the mob under control with much less bloodshed than if they get out of hand with impunity and the military have finally to be called out.

A cool deadly shot can keep a big mob at bay. It is when police shoot and miss that the crowd begin to jeer and lose all fear of the police.

It is a great mistake to fire over the head of a man to stop him, it only makes him think you are a bad shot.

My servant got me out of a very nasty predicament when we were travelling one pitch dark night through a forest we had never been in before. We were being led by a guide who we felt sure was taking us in the wrong direction in order to lead us into an ambush and rob us. We had been walking away from where the compass told us was our proper direction for hours.

My servant without a word loaded my rifle and handed it to me.

The guide immediately turned and in half an hour we were back at our lodgings.

He had seen me kill a galloping bear in thick high cover a few hours before, and he did not like the look of my double-barrel rifle pointing at his back.

CHAPTER LXII

INVENTORS

THERE are several types of inventors of firearms, including those who invent real improvements, and those who delay invention by making all sorts of things which are not only useless but are even dangerous.

Inventors, to do any good work, must be conversant with their subject, and, if possible, skilled mechanics as well.

This is the difficulty when shooting experts, who are not gunmakers, try to invent anything.

The shooter knows what is necessary, often far better than the gunmaker.

The shooter has to use the firearm, and often finds details in them, which are very beautiful perhaps, from a mechanical point of view, but which are very awkward or even impossible from the practical shooting point of view. A noisy bolt action for example.

The shooter knows what he wants but cannot put it into practical shape; the gunmaker, if he is not a shooting man as well, does not know of this want.

The best way out of the difficulty is for the shooter to collaborate with the skilled mechanic and then between them they can evolve something really useful. This is the way most improvements are evolved, the shooter constantly testing the invention and pointing out its *faults* to the gunmaker who alters till the thing works well.

If an expert mechanic (even if he is a gunmaker), who is not a shooting man tries to invent a firearm improvement by himself, and he finds it works in the workshop, he thinks that is all that is necessary, and the invention is a failure as no shooting man will use it.

The expert shot who is unmechanical, cannot put his ideas into practical shape, and if he does not go to a gunmaker and ask his help, the invention never takes shape; in this way some invaluable inventions never see the light, for want of a little mechanical knowledge.

But there is a third type of inventor, who is absolutely hopeless and the despair of any shooting man he shows his invention to.

This is the man who knows nothing about shooting but he has his own ideas as to how shooting is done, and is too conceited ever to try to learn anything.

He is the type of man who says "Oh, we will muddle through."

Such a man has a vague idea that, as he himself cannot shoot, therefore his own individual difficulties if he tried to handle a firearm are

the difficulties which all shooting experts labour under.

He does not know that an expert laughs at the difficulties of a beginner, which never trouble a man when he has become expert.

As well might a man the first time he is put on a horse imagine that, because he has to fly up and down off the saddle at each movement of a cantering horse, that the expert also has to take care not to fall off.

The expert can sit on a cantering horse without the least lifting from the saddle, whereas the beginner flops up and down.

In the same way the expert shot has passed the stage which the inexpert inventor tries to invent against.

A horseman would not buy a saddle with straps to tie down the rider, invented by a man who did not ride.

The non-rider thinks such things absolutely necessary to keep from falling off, the expert horseman not only knows such things are unnecessary, but would be a danger in case the horse fell, as the rider could not fall clear.

In the same way inventors of firearms, if they are not shooting men, invent dangerous things for overcoming dangers which do not exist except in their own imaginations.

This would not matter so much if they would listen to experts but they refuse to learn, and actually try to instruct experts.

I had a man come in recently to show me a terribly dangerous pistol he had invented.

He was pointing it about in all sorts of dangerous directions and finally put the muzzle against his own body whilst he tried to cock it.

I suggested to him he had better first see if it was loaded.

He smiled at me in a pitying superior way, but opened the breech and took out a loaded cartridge.

"Why it is loaded," he casually remarked, re-inserting the cartridge and beginning again to fumble with the lock, whilst he held the muzzle against his body.

I said, "Don't you know you can *kill* yourself if it goes off,"—"that is the great beauty of my invention," he informed me radiant with delight, "I have made this thing," pushing the trigger with his left thumb, "so that it only moves at a pressure of fourteen pounds so it is quite safe."

These know-alls work up through all the steps man has gone through in perfecting firearms, instead of taking up the work from the highest it has come to.

Most likely the first inventor of firearms found he shot people accidentally when "pulling at this thing" (as my friend the inventor called the trigger), then discovered by experience that, however heavy the trigger-pull is made, it is sure to kill somebody accidentally if pulled hard enough, and finally came to the conclusion that it is safer to have a light trigger-pull if the muzzle

is not pointed in a dangerous direction, than to have a half-ton trigger-pull and keep the muzzle pointed against one's body.

In the matter of sights an optician, even if ignorant of firearms, may be able to give a valuable hint

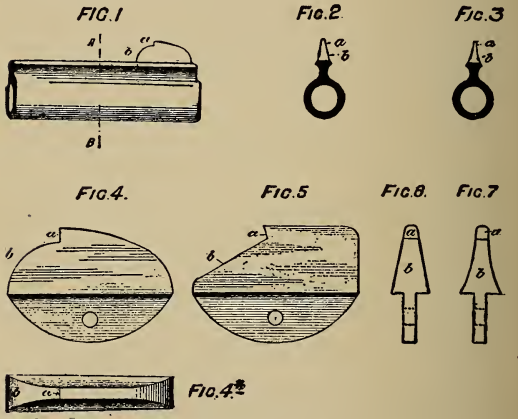


PLATE 19. WINANS' REVOLVER FRONT SIGHTS

to an inventor, but this usually applies to sights for accurate aiming at distant stationary objects; for a pistol it is more often expert shooting knowledge which is useful in designing sights.

It was my combination of sculptor and shooter which gave me the idea of my front sight, any one not a sculptor would not be apt to stumble on the idea of undercutting the sight so as to give a deep

shadow below and so make the top stand out light against a dark lower portion. (See Plate 19.)

In the same way some entirely distinct branch of learning may be of use to the inventor of fire-arms; but in all cases, this must be subservient to practical shooting knowledge; the man who tries to force his ideas onto a shooter, against the shooter's expert knowledge, makes a mistake.

The highest authority can always learn something new from an expert; but the man ignorant of a subject who tries to teach an expert merely exposes his ignorance, like a politician who tells a general how to conduct a campaign.

CHAPTER LXIII

SIMPLIFICATION

It is human nature to keep on in the same old groove, to try to avoid change, even if that change is for the better. This habit is owing to it being so much easier not to have to think for oneself but merely to do as you see others do.

But following convention is not progress.

Convention is the deadly enemy of progress. Simplification is the twin sister of progress. All improvements are the result of simplification, not of elaboration.

The public when they see some very elaborate invention say "how clever," but the really clever inventor is the one who can make a simple apparatus do the work that formerly could be done only by a much more complicated apparatus, or even took several apparatuses to accomplish.

The Universe appears to consist of endless variety, but the more it is studied (whatever else remains a mystery), this one fact becomes plainer and plainer.

Everything acts in unison.

The Universe is One Perfect Whole.

The Universe can, even with our limited knowledge, be reduced to a few simple elements, governed by a few simple "laws."

It is, from a solar system, to a sub-microscopical organism, subject to the same "laws" and working as one whole.

Probably, it will be ultimately discovered that there is only one "Law" and one Element in the Universe.

All has to obey this "Law," there is no such thing as "luck," "chance," or destruction. All has always existed through incessant permutation; and will exist, from all eternity, through all eternity.

The ancients, and the modern Mahometans knew this. The ancients called it *Fate*, the Moslems call it *Kismet*. If a man tries to make an automatic pistol contrary to the Laws of Nature, it naturally will not operate properly, he loses his temper, says it is just his luck, but he reasons wrongly.

If he studies the laws of mechanics, which are one form of the Law of Nature, and complies with them, his pistol will act properly; if not and he is ignorant of the laws of mechanics, his pistol will not act properly; it is not his "hard luck" but simply that he is trying vainly to work against Nature, and Fate holds him in a steel grip.

If he obeys the Laws of Nature, which are another name for Fate, he can go on like a train following its rails, but he can no more make a pistol con-

structed on wrong principle function properly than he can stop the sun in its course.

Simplification is the goal to be striven for in pistol shooting as it is in sculpture.

I saw two men, as I was writing the above, mowing a field.

One, an elderly man, was working in the conventional manner, cutting short deep swaths with a half blunt scythe set at the wrong angle to the handle, working in a cramped position.

The other, a young man, was examining his scythe.

He altered the blade at an acuter angle to the handle and gave it a twist sideways so that the cutting edge should lie horizontal when in use.

Then he sharpened the blade as carefully as he would strop a razor.

Putting himself into a firm position so that he could swing from the hips as an athlete about to throw the discus would, he made long clean sweeps with his scythe, taking a short depth, but this with a clean cut, and the cut grass thrown clear to the side, his return being only just clear of the grass, like a good sculler feathering.

At the least sign of bad cutting, he re-sharpened the scythe.

Although I know nothing of mowing, I could see at once that this was an artist and a workman at his job, and one who used his brains and took a pride in doing good work.

I asked if he was not the champion mower of the

district. I was answered "not at all—he is only the carpenter."

This is the sort of man who invents.

He diagnoses faults and thinks out how to correct them. He did not, like the other man who had been mowing all his life, work as his father and grandfather had done, because it was the conventional manner. He thought out for himself and improved by simplification.

It is evident that the cut should come on gradually, not jump into a thick bunch of grass all at once, so he set the blade at an angle which made its entry into the grass deeper progressively, and so on with all the rest.

The inventor who knows his business, when he has made something to accomplish its object, does not rest there. This is only the "blocking out" as we sculptors call it.

Then he begins to simplify.

Anything not absolutely necessary is eliminated; he sees if some member cannot be dispensed with by making another fulfil two or even more functions.

This is how Nature works, many organs have several functions; the function of our tongues is not only speech but to help swallowing, to judge if what we put into our mouths is too hot or too cold to swallow, if it is fit for food, or corrosive, etc.

The automatic pistol is still capable of great improvement.

All the recoil is not made use of, some is wasted and diverts the aim by jumping the pistol about.

The noise of the discharge is an evil, it ought to be made to do work, not deafen.

To invent a sound-deadener to put on the pistol is working on wrong lines; it is not simplification but it is complication.

Instead of first making a noise and then inventing something to destroy that noise, why not avoid making that noise?

The idea that ugliness does not matter is also a fallacy.

I was objecting to a pistol a man was shooting (and of which he asked my opinion), on the ground that it was so ugly. "What has ugliness to do with a pistol?" he said. "In my opinion, everything," I answered.

Nothing correct mechanically is ugly, that is the Law of Nature.

The early, impractical, automatic pistols were extremely ugly; the best at present, the U. S. Army Colt, has graceful lines, and the perfect one will be beautiful.

The essence of architecture is beauty in utility.

Look at a first class hand made gun built by an Artist; it has the graceful lines of a classical piece of sculpture.

An automatic pistol should be as simple as possible, the simpler the less likely to go wrong.

The supposed antagonism between Art and

Mechanics, between Science and Religion are imaginary.

If we simplify Art to its essential essence and perfection as the Ancient Greeks did—what do we find?

Sculpture is proportion and the essential planes.

What else is mechanics?

Science reduces all to the ONE UNIVERSAL FIRST CAUSE, and this is also the foundation of all religion.

In pistol shooting, all resolves itself into aligning the pistol and discharging the bullet.

The shortest distance from one point to another is the straight line.

Therefore do not "flourish" or "brandish" the pistol up and down before discharging it.

Merely bring it to alignment and discharge it in so doing.

Time is wasted if the trigger is pressed after alignment. Therefore begin pressing the trigger as the pistol is coming to the level.

This is the whole art of pistol shooting.

The way to advance any art, however humble, is for each to help the other with his experience.

Nothing is so inimical to success as convention.

All progress is made on the lines of pruning off all not absolutely essential, in other words by simplification.

APPENDIX A

I THINK it advisable to give the following World's Records made by myself with revolvers and black powder as they are now unbeatable, the weapons and cartridges being obsolete.

They stand in the same category as the "high wheel" trotting records.

If there were similar records, diagrams, and details of scores made with sling, long bow, crossbow, Persian bow, American Indian bow, blow pipe, javelin, matchlock, wheellock, etc., available, of what inestimable value they would be to the historian and archeologist.

Instead, for want of such records, all knowledge of the capabilities of these weapons is vague and legendary.

Under each diagram I give all details. Most of diagrams are the actual size and all have the position of each bullet-hole accurately shown.

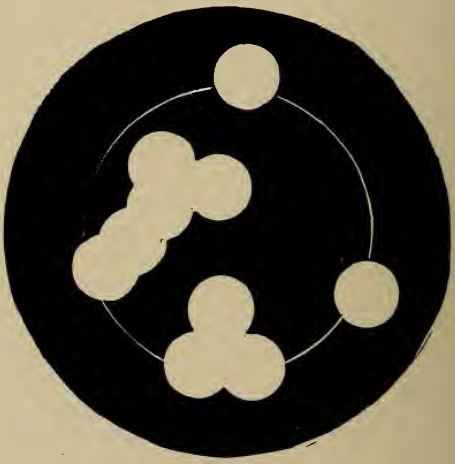


DIAGRAM I. AUTHOR'S WORLD'S RECORD SCORE.

Stationary, 20 yards, 10 shots, South London Rifle Club, May 21, 1889; .45 Colt Cavalry Revolver, Military sights, Eley ammunition. Black powder. (Full size.)

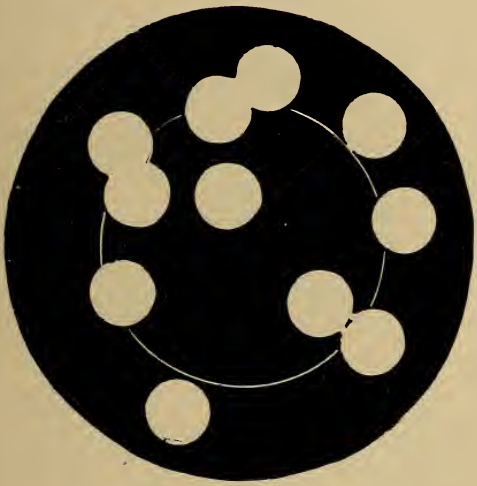


DIAGRAM 2. AUTHOR'S WORLD'S RECORD SCORE.

Stationary, 20 yards, 11 shots, South London Rifle Club, August 21, 1888; .44 Smith & Wesson Revolver, U. M. C. gallery ammunition. Black powder. (Full size.)

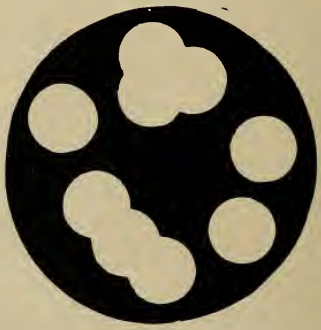


DIAGRAM 3. AUTHOR'S WORLD'S RECORD SCORE.

Nine shots at 20 yards, North London Rifle Club, May 5, 1897. Black powder; .44 Smith & Wesson Revolver, gallery ammunition.

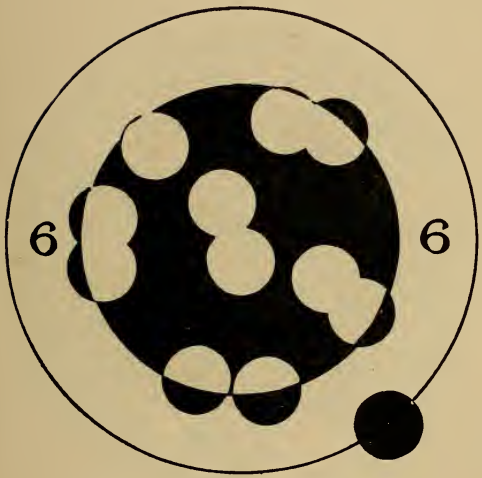


DIAGRAM 4. AUTHOR'S WORLD'S RECORD SCORE.

Twelve shots at 20 yards, at the North London Rifle Club, Sept. 4, 1895. Black powder; .44 Smith & Wesson Revolver, gallery ammunition.

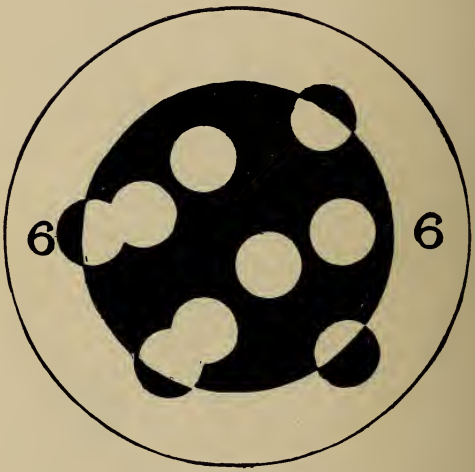


DIAGRAM 5. AUTHOR'S WORLD'S RECORD SCORE.

Nine shots at 20 yards, at South London Rifle Club, Sept. 22, 1892. Colt .45 Target Revolver. English "Mark I" regulation ammunition. Black powder.

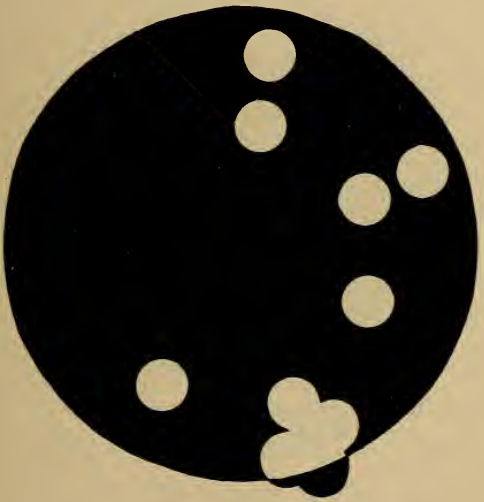


DIAGRAM 6. AUTHOR'S WORLD'S RECORD SCORE.

Ten shots at 20 yards, at South London Rifle Club, July 3, 1888; Smith & Wesson .32 break-down model. Black powder.

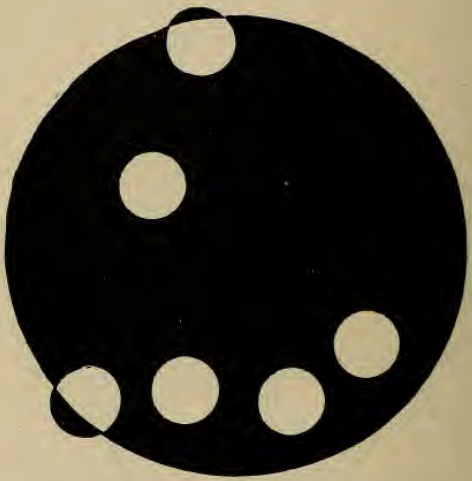


DIAGRAM 7. AUTHOR'S WORLD'S RECORD SCORE. TWENTY YARDS DISAPPEARING TARGET.

"Military" target, Wimbledon, 1888; .45 Smith & Wesson Revolver. Eley's ammunition. Black powder. (Full size.)

DIAGRAM 8. AUTHOR'S WORLD'S RECORD SCORE. TWENTY YARDS DISAPPEARING TARGET.

North London Rifle Club, May 29, 1895; .45 Smith & Wesson Revolver, U. M. C. ammunition. Black powder. (Full size.)

DIAGRAM 9. AUTHOR'S WORLD'S RECORD SCORE. TWENTY YARDS DISAPPEARING TARGET.

"Any" Revolver, Bisley, 1896; .45 Smith & Wesson Revolver, U. M. C. ammunition. Black powder. (Full size.)

DIAGRAM 10. AUTHOR'S WORLD'S RECORD SCORE. SIX SHOTS IN 12 SECONDS.

"Any" Revolver, Bisley, 1895. Rapid firing; .44 Smith & Wesson Revolver, U. M. C. gallery ammunition. Black powder. (Full size.)

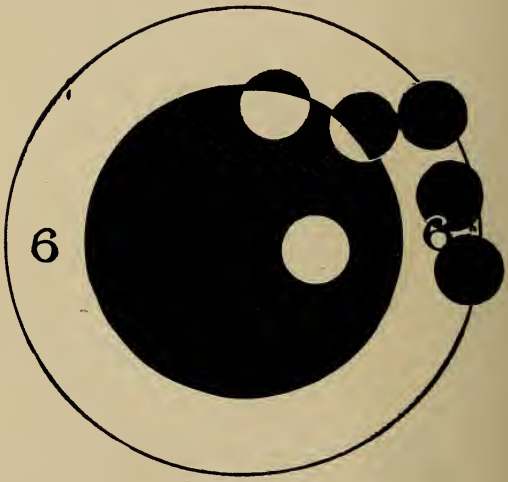


DIAGRAM II. AUTHOR'S WORLD'S RECORD SCORE FOR MILITARY REVOLVER AND SIGHTS.

Bisley, 1895. Six shots in 12 seconds at 20 yards; .45 Smith & Wesson Revolver, U. M. C. ammunition. Black powder. (Full size.)

DIAGRAM 12. AUTHOR'S WORLD'S RECORD SCORE. TWENTY YARDS RAPID-FIRING TARGET.

Bisley, 1895. .45 Smith & Wesson Military Revolver, Winans sights. U. M. C. smokeless ammunition. Black powder. (Full size.)

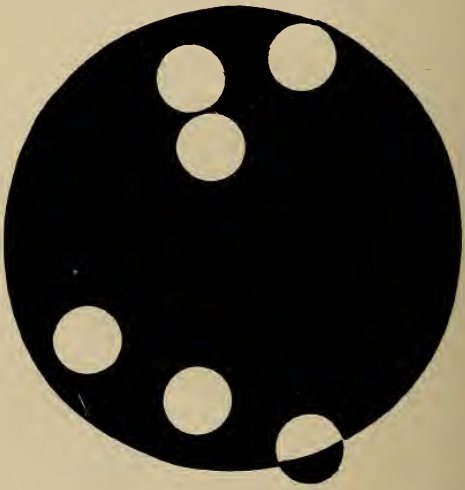


DIAGRAM 13. AUTHOR'S WORLD'S RECORD SCORE. FOR 3-INCH BULL'S-EYE TRAVERSING TARGET, 20 YARDS.

Wimbledon, 1888; .45 Smith & Wesson Revolver, Eley ammunition. Black powder. (Full size.)

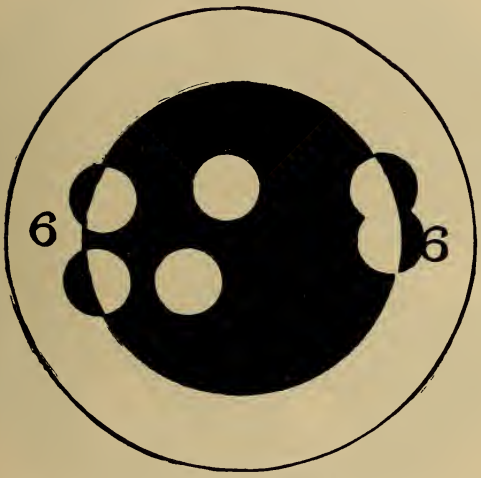


DIAGRAM 14. AUTHOR'S WORLD'S RECORD SCORE. FOR 2-INCH BULL'S-EYE TRAVERSING TARGET, 20 YARDS.

Bisley, 1896. .45 Smith & Wesson Revolver, U. M. C. ammunition. Black powder. (Full size.)

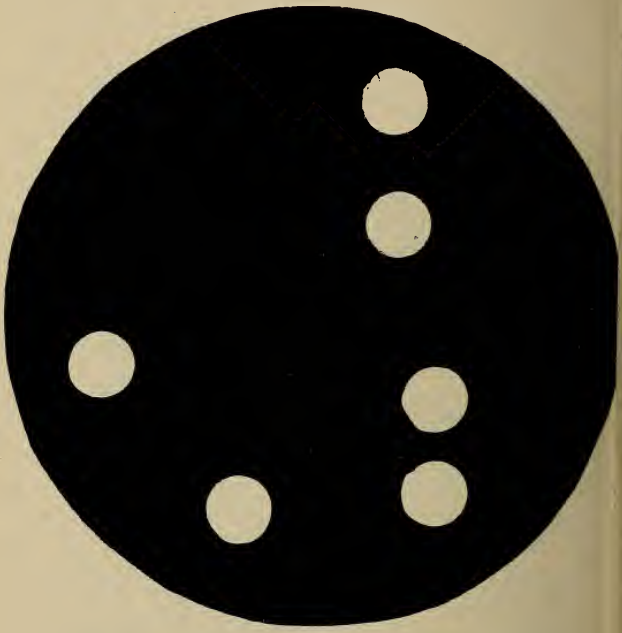


DIAGRAM 15. AUTHOR'S WORLD'S RECORD SCORE ADVANCING TARGET.

"Any" Revolver, Bisley, 1896; .44 Smith & Wesson Revolver, U. M. C. gallery ammunition. Black powder. Target advanced from 50 yards to 20 yards. (Full size.)

DIAGRAM 16. AUTHOR'S WORLD'S RECORD SCORE FIFTY YARDS TARGET.

Bisley, 1894. Twelve consecutive shots: Six with .44 Smith & Wesson Revolver, six with .38 Smith & Wesson Revolver. Smith & Wesson self-lubricating bullet. Black powder. (Half size.)

Full Sized Diagrams of Twelve highest possible Scores made by WALTER WINANS in Revolver Competitions at 20 Yards in 1895. These are the Twelve best Scores of those he won the following Competitions with. Bisley Any Revolver aggregate. Bisley Military Revolver aggregate. Bisley Revolver Grand aggregate. North London Rifle Club's Revolver Championship. South London Rifle Club's Revolver Championship. Swallow Street Revolver Gallery Challenge Cup. Also many First Prizes in Individual Competitions.
May 29th North London Rifle Club
First Prize
June 15th North London Rifle Club First Prize. & First Six Shots of the best on Record 12 Shot Score counting 83 out of a possible 84.
July 18th Bisley Revolver Pool
The Top Score
August 1st South London Rifle Club
First Prize
September 4th North London Rifle Club
First Prize
May 25th North London Rifle Club
First Prize
July 20th Bisley Sliding Series Military
Best on Record Score
September 7th North London Rifle Club
First Prize
September 12th South London Rifle Club
First Prize
September 18th North London Rifle Club
First Prize.
October 25th North London Rifle Club
First Prize
October 11th Swallow Street Gallery London
Winning Challenge Cup.
The North London Scores are part of the aggregate of 411 points out of a possible 420, which is the best on Record and he won the Revolver Championship of the Club all three Years. The South London Rifle Club Score is the best out of the aggregate of 524 out of a possible 336, two points better than his previous best on record and won the Championship of the Club for the 8th time. He also made top Score in the Team Shoot of the North London Rifle Club's Revolver Match and won the Smokeless Powder Revolver Competition, and numerous Spoon Competitions during the Year.

DIAGRAM 17. TWELVE HIGHEST POSSIBLE SCORES MADE BY THE AUTHOR IN REVOLVER COMPETITIONS AT 20 YARDS IN 1895.

English regulation mark ammunition. Black powder. The diameter of the original bull's-eye is 2 inches.

APPENDIX B

THE LAW RELATING TO REVOLVERS AND REVOLVER SHOOTING IN GREAT BRITAIN AND IRELAND

It is perhaps advisable to explain something about the right of carrying revolvers in England, and the using them in cases of necessity, and first it should be explained that a revolver is a gun so far as the Gun License Act of 1870 (33 and 34 Vict. c. 57) is concerned, and that a license fee of 10/ per annum has to be paid for the privilege of carrying or using one, though a license to kill game includes the lesser gun license. In fact it has ever been held that a small toy pocket pistol is a firearm for the purpose of the Act. There are various exceptions to the necessity of taking out this license, and it may be as well to enumerate them, especially as many people keep revolvers in their houses and would be astonished if they thought that a gun license was necessary for the so doing—but it is not, so long as the revolver is kept or used in a dwelling house, or the curtilage of a dwelling house. This is one of the exceptions to the Act, and a very proper and necessary exception it is, for it would be most unreasonable to enact that the mere keeping a revolver for the purposes of protection should compel one to take out an annual license. Moreover the enforcement of such a restriction would be almost impossible without an inquisitorial search through every house.

Probably because there is very little reason for carrying a revolver about with one in this country the exception does not apply to the so doing, and the mere taking a revolver across the street would technically compel the taking out a license. The curtilage of a house is much the same as its courtyard, and would no doubt include a yard and garden adjoining the house, but not a field beyond.

Further exceptions are that no penalty is to be incurred by any person in the naval, military, or volunteer service, or in the constabulary or other police force, but it should be noted that this exception applies only where the person claiming it is in the performance of a duty or in target practice, so that the policeman or volunteer off duty would still be subject to the obligation of having a license.

Another exception is that of any one carrying a firearm belonging to a person having a license or certificate to kill game or having a gun license, if he is carrying it by order of, or for the use of, such licensed or certificated person, only he is bound to give his name and address and the name and address of his employer if called upon.

The occupier of lands using or carrying a firearm for the purpose only of scaring birds or killing vermin on such lands is exempt too, as also any one using or carrying a firearm for the same purpose on any lands by order of the occupier, if the latter has a game license or certificate, or a gun license. Again, a gunsmith or his servant carrying a firearm in the ordinary course of trade, or testing it in a special place, need not have a license.

Lastly, a common carrier carrying a revolver in the ordinary course of business is exempt.

To show how strict the law is, it may be added that the killing of vermin, which, as above mentioned, is allowed without a license does not include rabbits.

As the penalty is £10 for carrying firearms without a license, I have thought it advisable to enlarge somewhat fully on the above topic.

There are also various penalties and punishments which may be imposed upon persons misbehaving while in the possession of loaded firearms, or wantonly discharging them. Thus any one who is in possession of a loaded firearm and is found to be drunk, may be apprehended, and is liable to a penalty not exceeding 40/, or, in the discretion of the Court, to imprisonment with or without hard labour for not more than one month.

Then, any person who in the streets of a town wantonly discharges any firearm to the obstruction, annoyance, or danger of the residents or passengers, is liable to a penalty not exceeding 40/ for each offence, or, in the discretion of the justices, to imprisonment for not more than fourteen days (no hard labour).

It is hardly necessary to say that the wrongful use of a revolver as an offensive weapon is very heavily punished, it being provided that any one who shoots at a person or attempts, by drawing a trigger or in any other manner, to discharge any kind of loaded arms at a person with intent to commit murder, is guilty of felony and liable to penal servitude for life, or any less term, or to imprisonment for not more than two years with or without hard labour and solitary confinement.

Again, any one who unlawfully and maliciously

wounds, or causes any grievous bodily harm to any person, or who shoots at any person, or who by drawing a trigger or in any other manner attempts to discharge any kind of loaded arms at a person, with intent in any of these cases to maim, disfigure, or disable any person, or to do some other grievous bodily harm to any person, or with intent to resist or prevent the lawful apprehension or detainer of any person, is liable to penal servitude for life or for not less than three years or to imprisonment for not more than two years with or without hard labour and solitary confinement. "Loaded arms" are defined as "any gun, pistol, or other arms which shall be loaded in the barrel with gunpowder or any other explosive substance, and ball, shot, slug, or other destructive material, although the attempt to discharge the same may fail for want of proper priming, or from any other cause." Finally, any one who unlawfully and maliciously wounds or inflicts any grievous bodily harm upon any person with or without any weapon or instrument, is liable to penal servitude for three years, or to imprisonment for not more than two years with or without hard labour. The words "unlawfully and maliciously" are difficult to construe, and therefore it may be well to state that a man who fired in the direction of a punt, in order to deter the occupant from fowling in a particular locality, and wounded him in so doing, was convicted of malicious wounding; and generally that if a wound were to be caused mischievously and without excuse the person who inflicted it would probably be found guilty under this enactment.

So much for the strict offences caused by the improperly carrying or making use of revolvers. Before, however, leaving this subject it will be advisable to

enter at a little length into the rights which any one has of using a revolver in self-defence, or in some other analogous manner. Supposing a man has passed through the ordeal of the Gun License Act and is properly and legally carrying a loaded revolver, in what cases of emergency would he be justified in using it? Well, this is a very difficult question to answer, and one which in each event would depend entirely on the circumstances of the particular case. It is therefore impossible for me to lay down any exact principles governing every event of the kind which might happen, and I will content myself with stating a few hypothetical instances and what course of conduct might be adopted in each instance.

There is no doubt on this point, anyhow,—that one is justified in using a loaded revolver in self-defence, where an attack of such a murderous character is made as to threaten one's own existence, or the infliction of serious bodily harm; and, if the assailant should be killed, yet the using of the revolver and so disposing of him would be deemed as having been justifiable. The same rule would apply to shooting an assassin who was attempting to kill someone else. For instance, if while standing on a railway platform I were to see a man shooting at someone in a railway carriage, and at such distance that I could not actively interfere except by shooting, I should be right in firing at the assailant, and though my shot should prove fatal, still no blame could be attached to me.

How far one is justified in using a revolver in beating off or capturing burglars in one's house is, as already mentioned, a matter which can only be decided by the facts of the particular case. Assuredly where a man is awakened in the night by the noise of burglars

breaking into or already in his house, and seizes his revolver and confronts the robbers, he would be justified in firing if the robbers threatened to attack him, and it is assumed that he would also be right in firing at a robber making off with booty who refused to stop when challenged to do so, if there were no reasonable chance of arresting him in any other way; though in the latter event he should endeavour so to shoot as to cripple rather than kill. Indeed it may be said, extraordinary though the statement may seem, that even in the hurry and skurry of a conflict with burglars the mind should remain calm and collected, so as to judge whether a mortal shot is required, rather than one which will only "wing" the opponent.

In connection with this branch of the subject, the justification of a fatal shot may to some extent depend upon whether the robber was himself armed. If he were, then the killing him would be more easily justifiable than if he were unarmed. This is somewhat instanced by the law regarding an assault and battery in self-defence, which is that where there is an assault the person resisting must show that his assault committed in self-defence was not more violent than he in good faith believed to be necessary and committed on reasonable grounds, so that it would not be right to inflict a heavy beating on a person who had only committed a slight assault upon one. So when all danger is past and a man strikes a blow not necessary for his defence, he commits an unjustifiable assault and battery,—and this principle would apply to the preventing of crimes, so that though one might be acting correctly in firing at and killing a man who was murderously assaulting a third person, yet, after the assault had been committed, it might be wrong to

kill the murderer if he were only discovered when running away, unless that was the only means of arresting him.

Another point which has sometimes exercised the minds of those in the habit of carrying revolvers is whether they are justified in using such a weapon to put an end to pain on the part of dumb animals where recovery is almost impossible. It may be said generally that no one can with safety interfere in such cases, even with the most benevolent intentions, so that if a horse, dog, or other animal has been so injured as to be suffering extreme agony, yet it would not be legal to put the poor creature out of its misery, unless with the consent of the owner.

The exception has been made by the Injured Animals Act, 1894, but that only empowers a constable to kill a horse, mule, or ass which is so severely injured that it cannot be led away, when the owner is absent or refuses to consent to its destruction, after a certificate has been obtained from a certified veterinary surgeon that the animal is mortally injured or so severely that it is cruel to keep it alive.

The exception that has been introduced by the Act of Parliament passed in 1894 and called "The Injured Animals Act, 1894," provides for the slaughter, without the owner's consent, of horses, mules, or asses, in cases of injury so serious as to make it cruel to keep them alive. It does not apply to animals other than those enumerated above, and is hedged round with such restrictions as to render it of little avail. These in brief are as follows: A constable must find the animal so severely injured that it cannot without cruelty be led away, the owner must be absent or refuse to consent to the destruction of the animal, and

the constable must obtain the certificate of a veterinary surgeon that the animal is mortally injured, or so severely that it is cruel to keep it alive. After doing all this the constable may kill the animal.

The foregoing statements as to the law are not exhaustive, but they are made with the intention of helping the revolver-carrying section of the public to know what they may be responsible for and on what occasions or emergency they may safely use their weapons. To make sure that no legal error has crept in, these statements have been submitted to Mr. C. Willoughby Williams, of No. 1 Brick Court, Temple, Barrister at Law, who is of opinion that the law as set out is correct.

It will be seen, from what is said above, that if a gun or a game license is obtained, it is not illegal to carry a loaded revolver, so that if any one had to go along a lonely road, or had received a threatening letter which had alarmed him, he would be quite in his right in taking about with him a loaded revolver. It would even be quite right for any one to carry about a loaded revolver in his pocket merely as a protection in case he should be unexpectedly attacked, but any one carrying about with him such an article should be prepared to use it only in cases of great emergency, and should keep a clear head on his shoulders.

Another example of the advantages of carrying a revolver would be if one were attacked by a mad dog. In such a case, if the dog attacked in a ferocious manner, it would be permissible to shoot the dog, but it would not be allowable to shoot a dog on the supposition that he was mad, unless he was attacking one; though, of course, if there were no doubt about the

dog's being mad, then, for the sake of others, it would be wise to shoot him.

Again, if while carrying a revolver any one were passed by a runaway horse, and such horse were about to run over a child, it might be permissible to shoot the horse in order to save the child, if one were too far off to catch hold of the animal. These, however, are all matters of degree, and what would be right and proper to do in one case might in a case almost similar be quite wrong.

NOTE.—Since the first edition of this book was issued, the Pistols Act of 1903 has come into force. This Act stops the sale, by retail or by auction, or the letting on hire, of any pistol (which would include a revolver), unless the purchaser has a gun or game license, or is entitled to use or carry a gun without such license, or unless the purchaser shows that he purposes to use the pistol only in his own house or the curtilage thereof, or that he is about to proceed abroad for a period of not less than six months. The Act also prevents the sale or hiring out of a pistol to a person under the age of 18 years, and places a very heavy penalty on any one knowingly selling a pistol to a person who is intoxicated or not of sound mind.

APPENDIX C

THE LAW OF CARRYING WEAPONS IN THE UNITED STATES

THE statutes of the various States upon the subject of carrying weapons are substantially similar, the main differences relating to the persons exempted from their operation, and to the manner of carrying the weapon, some making it an offence to carry the weapon at all, whether concealed or not; others prohibiting the carrying of concealed weapons only.

These statutes have been held to be police regulations, and not to conflict with the constitutional right of the people to keep and bear arms.

Weapons are considered to be concealed, within the intent of the statutes, when they cannot be readily seen by ordinary observation.

In some of the States, as in Kentucky, Louisiana, and Missouri, the carrying of "deadly" or "dangerous" weapons is prohibited. Most of the States, however, specify the weapons prohibited. Such weapons as pistols, dirks, butchers' or bowie knives, stilettos, daggers, swords, brass knuckles, razors, slugs, etc., are usually specified in nearly all of the statutes.

Officers of the law are usually exempted from the operation of the statutes. The officers must, however, be duly appointed, and in the discharge of their duties at the time of carrying the weapons.

Persons who are threatened with bodily harm or who have reasonable grounds to apprehend danger or attack, are usually justified in carrying concealed weapons. It is not every idle threat, however, which would justify one in carrying concealed weapons. The threat must be such as to cause a reasonable apprehension of danger. Examples of this exemption are found in the statutes of Alabama, Kentucky, Mississippi, Texas, Maryland, and West Virginia.

Persons on their own premises are frequently exempted from the operation of the statutes. This is so in Arkansas, North Carolina, and Texas.

Some of the statutes exempt persons who are travelling. This is so in Arkansas, Mississippi, and Texas.

The burden of proving exemption rests usually upon the accused. This has been expressly decided in Arkansas, Indiana, Iowa, Kentucky, Missouri, Montana, North Carolina, Tennessee, and Texas. In Michigan, however, it has been held that the prosecution must prove that the defendant does not fall within one of the exemptions.

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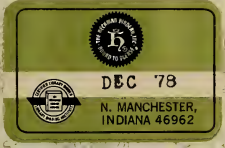

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